ISCTE Business School
Instituto Universitário de Lisboa

DRIVING CONSUMER CO-CREATION OF VALUE THROUGH CONSUMER ENGAGEMENT: AN INVESTIGATION ON ANTECEDENTS AND CONSEQUENCES OF CONSUMER ENGAGEMENT IN THE AIRLINE INDUSTRY

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Inês Filipa de Sousa Moura

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Abstract

Nowadays, consumers are each time more interested in getting involved with brands and together with them to create value for both parties. Consumers more informed and, before they ever think about purchasing a product/service, they cross their paths with lots of brands. To make our brand present in consumers' mind is necessary to create a relationship with consumers, it is necessary to engaged them with our brand. This dissertation explores the consumer engagement in a particular industry, airlines.

Although there are lots of studies on consumer engagement, just a few are empirical and also, it remains unclear what really drives and the consequences of consumer engagement. Therefore, this dissertation explores the effect of atmospherics in-flight characteristics, customer-to-customer interaction, brand experience and brand love as antecedents of engagement and, also explores co-creation as a consequence of engaged consumers.

The findings suggest that all proposed antecedents influences consumer engagement, except customer-to-customer interaction on lifetime value. Moreover, consumer engagement reveled also important in explaining co-creation of value.

Keywords: Consumer engagement, airlines, atmospherics in-flight characteristics, customer-to-customer interaction, brand experience, brand love, co-creation

JEL Classification: M310: Marketing and Advertising

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Resumo

Hoje em dia, os consumidores estão cada vez mais interessados em se envolverem com as marcas e juntamente com elas criarem valor para ambos. Os consumidores estão mais informados e antes de sequer pensarem em comprar um produto ou serviço cruzam os seus caminhos com imensas marcas. Para tornar a nossa marca presente na cabeça dos consumidores é necessário apostar em criar uma relação com o consumidor, comprometendo-os (engaging) com a nossa marca. Esta dissertação explora o comprometimento (engagement) do consumidor em companhias aéreas.

Apesar de haverem inumeros estudos sobre o comprometimento (engagement) do consumidor, apenas uma proporção é empírica para além de que ainda continua pouco claro o que realmente antecede o comprometimento (engagement) do consumidor. Por isso, esta dissertação explora o efeito das caraterísticas atmosféricas dentro do avião, a interação entre consumidores, a experiência da marca e amor à marca como antecedentes do comprometimento (engagement) do consumidor, bem como explora a co-criação de valor como uma consequência dos consumidores estarem comprometidos (engaged).

Os resultados mostram que todos os antecedentes propostos influenciam o comprometimento (engagement) do consumidor, exceto a interação entre consumidores relativamente à duração da "vida" dos consumidores com a marca (lifetime value). Para além disso, o comprometimento (engagement) do consumidor revelou ser de grande importância para explicar a co-criação de valor.

Keywords: Compromisso, companhias aéreas, características atmosfericas dentro do avião, interação entre consumidores, experiência da marca, amor à marca, co-criação de valor

JEL Classification: M310: Marketing and Advertising
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1. Introduction

This study emphasizes the importance of service atmospherics, customer-to-customer interaction (c2c), brand experience and brand love in the customer engagement (with the airline companies while inside the flight) and highlights one consequence of it which is co-creation. Its main objective is to study the offline elements (for opposition to online) that can create engagement with consumers.

The remainder of the paper is organized as follows. The next section presents the proposed model of the major theoretical constructs of this study: customer engagement with brand, atmospherics in-flight characteristics, customer-to-customer interaction, brand experience, brand love and co-creation. The following section describes the methodology of the empirical study of a sample of travelers gathered in Lisbon. The section 4 discusses the results found. The study concludes with a summary of the major theoretical and managerial implications.

1.1 Relevance and interest

The main objective of this paper is to study the consumer engagement process with airlines. In this study, it will be highlighted four possible engagement antecedents which is the main focus and one probable outcome of the engagement process.

The most recent and the majority papers on consumer engagement focus on social media engagement variations (Chu and Kim, 2011; Brodie *et al.*, 2013; Wirtz *et al*., 2013; Tsai and Men, 2013; Hollebeek *et al*., 2014; Vries and Carlson, 2014; Cabiddy *et al*., 2014; Kabadayi and Price, 2014; Dessart and Morgan-Thomas, 2015; Baldus *et al.*, 2015;). Meanwhile, this paper focus more on engagement with the experience of flying, with the company when the passenger is inside the airplane rather than digital engagement with the company or outside flight engagement. The decision to choose this approach is to bring novelty to the research and develop the general comprehension of engagement. Nevertheless, the engagement occurred in the social media environment influence the engagement in offline environment and, this aspect was taken into consideration.

1.2 Research question and objectives

Although engagement had been examined by several authors (Brodie *et al*., 2011; Resnick, 2001; Hollebeek, 2011D; Verhoef *et al.*, 2010; Vivek *et al*., 2014; Kumar and Pansari, 2016; Pansari and Kumar, 2017: Dessart *et al.*, 2016; Bowden, 2009a; Van Doorn *et*

al., 2010; Hapsari *et al.*, 2016) and their antecedents and consequences had been focus of study (Brodie *et al.*, 2011; Carvalho and Fernandes, 2018; Hollebeek, 2011D; Leckie *et al.*, 2016; Pansari and Kumar, 2017; Jakkola and Alexander, 2014) there is still a gap in the literature regarding these constructs as antecedents and outcome of consumer engagement with the airlines.

Jakkola and Alexander (2014) highlighted the importance of further research in understanding if the customers' engagement behavior is related to its propensity to engage in codedeveloping. Hollebeek *et al.*, (2014) , on the other hand, highlighted the importance of a scale of consumer-brand engagement in different service settings and different brands, to incorporate the concepts of brand love and brand experience to further validate the consumer-brand engagement scale and to understand the specific consumer-brand engagement phases/cycles. Kumar and Pansari (2016) asked for further research in understanding the time-varying effect of engagement, and the impact of consumer engagement and employee engagement on firm performance.

Having these perspectives in mind, this thesis will be discussing how consumer engagement leads to co-creation (as suggested by Jakkola and Alexander (2014), it will incorporate the concepts of brand love and brand experience in one scale of consumer engagement (corresponding to the further research direction of Hollebeek *et al.*, 2014).

By liking atmospherics in-flight characteristics, experience with engagement, while simultaneously relating them with other antecedents and co-creation as engagement's outcome, this paper brings novelty to the studies.

The antecedents were selected based on research on various articles, having in mind that there should be one exhibiting the conditions/ambience in each consumer is involved, other representing the situation per se and other related with the emotions consumers could create with the airline. For that, atmospherics, customer-to-customer interaction were picked up, brand experience was chosen based on the what represents the situation and brand love. These were the antecedents for engagement in this paper. Moreover, as co-creation has been given a salience in the last decades (Ramirez,1999; Vargo and Lusch, 2004; Shaw *et al.*, 2011; Hilton *et al*., 2012; Fernandes and Remelhe, 2016; Buonincontri *et al*., 2017; Delpechitre *et al*., 2018) it was also chosen as a probable outcome of engagement. Understanding what most triggers consumers to be engaged with airlines brands, if love feeling leads to engagement and how to boost co-creation are, therefore, the aim of this research. Consequently, the following research question was formulated:

How atmospherics characteristics, customer-to-customer interaction, brand experience as well as brand love influence consumer engagement? Could engaged customers be more pro-active in the co-creation process? And can be engagement a mediator between atmospherics characteristics, customer-to-customer interaction, brand experience and brand love and co-creation?

To answer to the following research question and to orient the statistical approach, the following research objectives were delineated:

- Identification of the antecedents and consequence of consumer engagement.
- Compare results between low cost and flag users' carrier.
- Analyze the drivers from the set have the greatest impact on the process of engagement with airlines.
- Explore the co-creation process as a consequence of engagement.
- Understand whether engagement performs as a mediator between the proposed drivers and the outcome.

The next paragraph shows the structure that this thesis follows by using an illustration with the main touched points in each section.

1.3 Structure of the thesis

This thesis is divided in five main sections as it follows – an introduction to theme, the literature review, presentation of the conceptual model and formulation of hypothesis, the explanation of the research methodology and the results found and finally a brief discussion of the main findings and suggestion of areas for further research.

Figure 1 – Structure of the thesis

Source: Own elaboration

2. Literature review

2.1. Consumer engagement

In a world marked by an extreme competition, with very similar products, services' offers, the landscape to keep on the game seems to be use other mechanisms that make consumers desiring to stay with our brand (Laming and Mason, 2014).

Traditional marketing constructs were widely used by companies to forecast what would be the excepted consumer behaviour outcomes (Hollebeek, 2011, Demyst). However, these concepts are limited to explain and predict the consumer's behavior outcomes (Calder et al., 2013). With the objective of overcome this limitation, study the importance of consumer engagement is crucial to better understand consumers.

Society and its paradigms are changing. The way customers interact with each other and the way brands interact with customers are also changing (So *et al.*, 2014; Maslowska *et al.*, 2016). Nowadays, as a result of digital evolution, it is much more easier to create social networks, whether between customers or between customers and the brand, and to keep a close and always on type of relationship between them (Verhoef *et al.*, 2010; So *et al.*, 2014). With this trend in tone, continuing measuring consumers only by its monetary value is limited due to date and, in addition, customers also need to be measured by its non-transactional value (Verhoef *et al.*, 2010; Vivek *et al.*, 2014; Kumar and Pansari, 2016; Pansari and Kumar, 2017).

Also, companies are changing the way they do business and rather than focusing solely on hard selling, they are trying to shift for more an emotional approach as a way to connect with consumers (Pansari and Kumar, 2017).

There have been studied different measures of how to evaluate customers, centered on the customer such as "customer *satisfaction, customer involvement, customer trust, customer commitment*" (Pansari and Kumar, 2017: 295) and more recently consumer engagement (Pansari and Kumar, 2017). However, due to date there is no consensus on the definition of engagement neither what dimensions it encompasses nor the engagement objects (Dessart *et al.*, 2016) and also, how to accurately measure engagement (Dessart *et al.*, 2016).

Various conceptualizations of engagement were made, emphasis different aspects as it could be seen in table 2 in appendix A.1.

Engagement was also defined as "…*the attitude, behavior, the level of connectedness (1) among customers, (2) between customers and employees and (3) of customers and employees within a firm…*" (Kumar and Pansari 2016: 498)

Engagement implies a connection between two parties should exist which are the subject and an/various objects (Vivek *et al.,* 2014; Dessart *et al*., 2016) based on interactivity (Brodie *et al.,* 2011; Hollebeek *et al.,* 2014). Usually the object of study is the consumer, whether the different objects could be brands, companies, brand community (Hollebeek, 2011. D; Vivek *et al.,* 2014; Dessart *et al.,* 2016). This connection is not casual, rather it is a long-lasting relationship of interdependence between parties (Resnick, 2001) in which both parties take an active role (Hollebeek, 2011D).

Conceptualizations of engagement have also a discrepancy regarding the dimensions of it. On one hand, some authors considered to be a unidimensional concept (Bowden, 2009; Van Doorn *et al.,* 2010). However, the majority of the studies analysed it as a multidimensional concept including mostly rational, emotional and behavioural components (Hollebeek, 2011 D; Pansari and Kumar, 2017) or also, a social component (Hollebeek *et al.*, 2016)

When individuals are engaged with the brands, a strong psychological connection is nurtured (Hapsari *et al.,* 2016) which is turns make consumers more willing to create and sustain a relationship with it which works as driver for them to recommend the brand, say positive things about it (Hapsari *et al.*, 2016) and continue purchasing from that specific brand (Oliver, 1990; Vivek *et al.,* 2012).

Diverse antecedents of engagement_are pointed such as participation (Carvalho and Fernandes, 2018), involvement (Hollebeek, 2011, D.; Leckie *et al.,* 2016; Carvalho and Fernandes, 2018) flow, rapport (Brodie *et al.,* 2011; Hollebeek, 2011 D), consumer participation (Leckie *et al.,* 2016), self-expressive brands (Leckie *et al.,* 2016), previous experience (Bowden, 2009a), interactivity (Carvalho and Fernandes, 2018), flow experience (Carvalho and Fernandes, 2018) and customer resource integration (Hollebeek *et al.*, 2016).

Also, there are different perspectives on the consequences of engagement. Bowden, 2009a affirms that engagement process results in loyalty (Hollebeek, 2011, D), rapport (Hollebeek, 2011, D), trust (Pansari and Kumar, 2017; Carvalho and Fernandes, 2018), co-created value (Hollebeek, 2011, D), co-creation (Brodie et al., 2011; Jakkola and Alexander, 2014; Hollebeek *et al.,* 2016), brand experience (Hollebeek, 2011,D), improving firm

performance (Pansari and Kumar, 2017), permission marketing (Pansari and Kumar, 2017), customer individual operant resource development (Hollebeek *et al.*, 2016), commitment (Carvalho and Fernandes, 2018), word-of-mouth referrals (Carvalho and Fernandes, 2018), customer cumulative satisfaction (Carvalho and Fernandes, 2018) and influence on companies' performance indicators (Pansari and Kumar, 2017).

However, these mentioned antecedents and consequences are not only confined to act precisely like that and, sometimes, they could also be part of engagement, overlapping that concept (Hollebeek *et al.*, 2016).

Different forms of measuring consumer engagement were also proposed whether some experts defend to only includes the value beyond purchases (Van Doorn *et al.*, 2010) while others support that it should include purchases in parallel as other components (Brodie *et al.*, 2011; Jakkola and Alexander, 2014; Pansari and Kumar, 2017).

The concept of consumer engagement encompasses four different sources of value obtained from consumers which are: lifetime value (purchases), incentivized referrals, influence value and knowledge value (Kumar and Pansari, 2016).

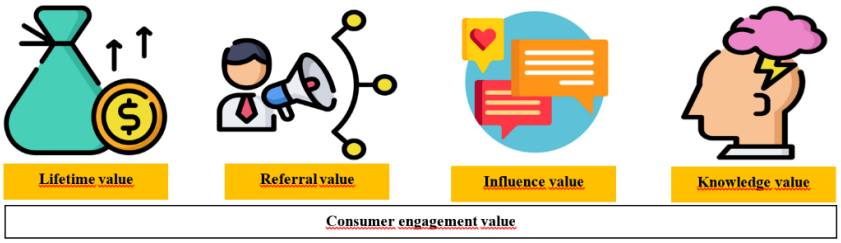


FIGURE 2: THE CONCEPT OF CONSUMER ENGAGEMENT VALUE (ADAPTED FROM: KUMAR AND PANSARI, 2016)

Source of icons: FlatICON
Own elaboration based on sources

2.1.1. Lifetime value (Customer purchases)

The idea that a company is centered on the consumer and its lifecycle is taken into account rather than the product lifecycle (Jain and Singh 2002). The consumer is measured on what he buys today and also, on what he could buy in the future, the transactions (Jain and Singh 2002). When purchasing a product, consumers are taking an active process, they know what to expect from the brand and also, they better know the brand (Carvalho and Fernandes, 2018).

The company's most valuable assets pass from products to people (consumers) which should be threat well so that the firm is able to attract and retain customers and, therefore, achieve a sustainable competitive advantage (Jain and Singh 2002).

In addition, as a result of more *"informed, networked, empowered and active"* (Kumar *et al.,* 2010: 301) consumers, consumer before buying a product, want to know the opinion of their family, friends and relatives. They do trust on them rather than, the marketing communications/messages that can be made by the brand (Villanueva *et al.,* 2008; Thakur, 2018). Moreover, referrals and the influence the consumers can do on others through their social networks are known to influence decision making process as well as purchase behavior (Kumar, Petersen *et al.,* 2010) As a consequence of it, measuring the referral and influence value that consumers can have on others turns crucial.

2.1.2. Referral value (Incentivized)

Incentivising customers to do referrals is one of the strategies that companies could adopt when they are engaged. Customer acquire by referrals are known for being more profitable (Villanueva *et al.,* 2008) than other types of communications campaigns that could exist. Moreover, this type of communication strategy is also preferable, in terms of managing an organization, to others since it is a source with higher credibility and cheaper costs (Villanueva *et al.,* 2008). The credibility is attained as a result of being other persons talking about our brand/products, and because traditional marketing communications are perceived as being persuasive (Villanueva *et al.,* 2008). On the other side, the costs can be decreased since the messages could spread faster and with lower firms' resource investment (Villanueva *et al.,* 2008).

Any positive or negative proclamation made by any companies' stakeholder and accessible to others is known for being a referral (Carvalho and Fernandes, 2018)

Give referrals to the brand is one of the most common behaviors of customers who are engaged (Chandler and Lusch, 2015) with it.

2.1.3. Influence value

Online consumers share their experiences with companies almost instantaneously in which they include information about product quality and the service (Thakur, 2018). In a world full of brands' noise, customers' reviews appear to be, in parallel with referrals, one of the most

trustable sources of communication (Thakur, 2018) since they are not paid work and also, are voluntary information.

The effect of customers' opinion spread across social media network is not limited to their close relationship and its magnitude can affect company's performance indicators (Pansari and Kumar, 2017).

2.1.4. Knowledge value

The most common form of participation is through feedback and suggestions (Sasha and Theingi, 2009) that customers make in relation with the company's offers and services. The consumers' feedback is defined as provide the opinion whether positive or negative to the company (Sasha and Theingi, 2009).

Consumers are seen as a valuable source of value since they have absorbed brand knowledge and based on it, they express their opinions and preferences (Hollebeek *et al.,* 2016; Pansari and Kumar, 2017). Actually, they act as company's consultants since they have a huge knowledge of the firms' products and with the feedback provided, they can provide guidance for the company (Eisingerich *et al.,* 2014). However, not every consumer provide feedback to firms. Actually, non-satisfied consumers are more prone to provide that feedback since a compensation for it could be achieved (Sasha and Theingi, 2009). In this regard, firms can use this feedback to incorporates on their organizational strategy (Pansari and Kumar, 2017).

Sum up of consumer engagement

Consumer engagement although not clearly defined in the literature (it has different conceptualizations, emphasis different aspects) (for example: Vivek *et al.,* 2014; Hollebeek *et al.,* 2014; Storbacka *et al.,* 2016; Dolan *et al.,* 2016; Dessart *et al.,* 2016; Harmeling *et al.,* 2016; Thakus, 2018; Eigenraam *et al.,* 2018) it agrees in some features. Therefore, consumer engagement is based on a strong psychological connection (Hapsari *et al.,* 2016) and it implies interactively long-lasting relationships (Resnick, 2001; Vivek *et al.,* 2014; Dessart *et al.,* 2016). That is the reason why one action isolated is not considered engagement (So *et al.,* 2014). It can be expressed in multiple ways such as: cognitively, emotionally, behaviorally (Hollebeek, 2011D; Pansari and Kumar, 2017). One venue to measure consumer engagement is through its direct and indirect contributions to firms' performance by measuring the actual and the prospects purchases (lifetime value), social sharing (whether incentivized or non-incentivized) (referrals and influence value) and its "expertise" about the brand (Knowledge value) (Kumar and Pansari, 2016).

2.2. Antecedents of consumer engagement

In this part of the literature revision will be discussed each of the proposed consumer engagement drivers. As previously mentioned, the antecedents of consumer engagement discussed are atmospherics conditions, customer-to-customer interaction, brand experience and brand love.

2.2.1. Atmospherics in-flight conditions

Servicescape, atmospherics conditions, physical environment, atmospherics cues are different conceptualizations used throughout the literature to mention the tangible and intangible elements that composed an ambience which are usually the consumers-first physical contact with the service (Dedeo ğlu *et al.,* 2015; Rajiv and Dado, 2013; Loureiro and Fialho, 2016). It is the environment surrounding in which the service is served (Dedeoğlu *et al.,* 2015), are the variables that could be manipulated and positively affect consumers (Rajiv and Dado, 2013).

Atmospherics conditions are usually studied with the lens of SOR model that, although is a quite old model, it is still very useful in explaining the impact of these variables on consumers' behavior (Spangenberg *et al.,* 1996). In this model, the existence of a stimulus (S) is interpreted by the organism (O) (normally the consumer) and, therefore, provokes a reaction (R) (Spangenberg *et al.,* 1996).

Servicescape is defined as the place where the service is consumed (Dedeoğlu *et al*., 2015) that stimulates the consumers, employees and others, which, in contact with it create a response.

However, different feelings and sensations could emerge from the same stimulus and, although the atmospherics could be manageable by managers, this subjectivity brings difficulties in deciding which set of atmospherics should be proceed (Rollo and McNeils, 2009).

Different types of responses could be created such as emotional, either positive or negative, or rational (Spangenberg *et al.,* 1996; Dedeoğlu *et al.,* 2015) that lead individuals to take behavioral actions. When the created emotions are positive, the individuals tend to approach to the service, in the opposite side, when the emotions are negative individuals tend to avoid the service (Spangenberg *et al.,* 1996). Throughout the literature, various behavior actions emerge from atmospherics stimulus (Loureiro and Fialho, 2016) such as feedback

intentions, word-of-mouth and a desire to remain with the company were highlighted (Sasha and Theingi, 2009).

The study of atmospherics it is not new. Its importance remains clear since atmospherics are able to impact the image created by consumers, influences their perception of value, causes feelings on consumers (Dedeoğlu *et al.,* 2015), influences consumers' decision process (Rollo and McNeil, 2009; Han and Hwang, 2017), impacts the perceptions of quality and satisfaction (Han and Hwang, 2017) and improves customer retention Rollo and McNeil (2009).

Atmospherics' conditions were examined in different industries with differences on the type of environment and differences on the atmospherics variables used (Winterm and Chapleo,2017; Ellen and Zhang, 2014; Ali and Omar, 2014; Moon and Han, 2017; Rollo and McNeil, 2009).

For instances, in context of students, servicescape elements used were physical (ambient conditions, temperature, air quality, noise, music, odour, space and layout), social servicescape (staff, other students, social density), socially symbolic servicescape (ethic signs and symbols, ethic objects) and natural servicescape (being away, sense of escape, natural setting, sense of belonging)(Wintermm and Chapleo, 2017), in context of restaurants , ambient conditions (temperature, aroma, air quality), spatial layout and functionality (layout, table, seating), signs, symbols and artifacts (flooring, plants, flowers, wall decor)(Ellen and Zhang,2014), in hotels, servicescape includes mainly two types of environments elements such as physical and social (staff and others customers behavior)(Ali and Omar, 2014), in airlines, elements such as air quality, temperature, odour, noise, food, layout and crew (Loureiro and Fialho, 2016) and in retail, mainly two factors were considered, interior aggregating ambient, design and social elements and exterior (Rollo and McNeil, 2009).

In different industries, contexts, the social component as it can be seen above, is identify as important (Wintermm and Chapleo, 2017; Ali and Omar, 2014; Rollo and McNeil, 2009), especially because the services depend on social interactions. In this regard, the relationship employee-consumer is mentioned of superior importance since it influences the consumers' perception of the service (Rollo and McNeil, 2009). Actually, employee could create a more positive environment for consumers through their friendly and genuine approach (Rollo and McNeil, 2009). Others aspects such as *"…comfort factors will not be consciously identified until there is a problem with one or more of them …"* (Rollo and McNeil, 2009:222).

To ensure the quality of the service provided by the flight attendants and regarding the impact they could have on in/flight experience, managers should bet on training that includes a more technical component but also behavioral, to let them know how to treat passengers (Kim *et al.*, 2016).

Differences in the type of services offered, either more functional or hedonic, makes consumers expecting specific set of atmospherics environment (Rollo and McNeils, 2009).

In the study of Han and Hwang (2017), on airline industry, it was found that the satisfactory atmospherics conditions have an effect on consumers' opinion about a service (which, in this regard, is positive). The study of atmospherics in-flight characteristics is crucial because consumers spend many time inside the airplane and want to be comfortable inside it during the time of the travel (Han and Hang, 2017).

Moreover, a desire to keep flying with that airline and make recommendations to others are also other characteristics of positively perceived environmental conditions (Han and Hwang, 2017).

In industries much more competitive, such as airlines industries, creating a specific environment contribute to keep passengers used to a specific level of quality and therefore, maintain a relationship with the airline (Loureiro and Fialho, 2016).

2.2.2. Customer-to-customer interaction

Services depend on the interaction and exchange between the service provider and the consumer and, consequently, human interactions are the basis of it (Wu 2008). The service provision usually implies an investment of resources not only by the service provider, which is obvious, but also for part of the consumers (Moura e Sá and Amorim, 2017). The exchange of resources between parties characterizes the service and from it, an output is generated (Moura Sá and Amorim, 2017).

Beyond the service per si, also the environment in which the service is provided impacts consumers, within which, consumers interaction with each other can occur (Moura Sá and Amorim, 2017). Customer-to-customer interaction (C2C) is described as the interactions that occur between customers (with each other) that influence their perception of the service experience (Fakharyan *et al.*, 2014), influence the service quality (Moura e Sá and Amorim, 2017), customer satisfaction and word-of-mouth and for that, C2C interaction is an important component to evaluate overall service provider (Fakharyan *et al.*, 2014). There are also,

particular cases that "*customer-to-customer (C2C) interactions play a much greater role in value creation processes…"* (Gruen *et al.*, 2007:537)

C2C interaction is within a network of concepts which it is related such as word-of-mouth (Rahman *et al*., 2015) although the second is conceptualized as taking part of the boarder C2C interaction (Rahman *et al.,* 2015). To understand the difference between both concepts, understanding the concept of word-of-mouth turns crucial. Word-of-mouth (WOM) is a spontaneous and relaxed conversation between two persons and the topic of the conversation can be the brand or any other object related with it (Rahman *et al.,* 2015). In addition, word-of-mouth is gaining importance since it was demonstrated to be more a more effective communication channel than the channels usually used by the companies (Rahman *et al.,* 2015). While, as previously mentioned, C2C interaction can be either conversations (which are a form of direct CCI) (Guen *et al.,* 2007; Harris and Barron, 2004) but also includes the observational behavior (Libai *et al.*, 2010).

As it is possible to examine from the previous definition and explained by Rahman *et al.*, (2015), interactions can occur between consumers as well as, customers or stakeholders, and the environment in which these interactions occur does not end to the service environment.

Examples of customer-to-customer interaction often includes helping each other, exchange useful information or talk with each other which can result in adding and receiving value to and from the other consumer (Gruen *et al.,* 2007; Harris and Baron, 2004).

The interactions occurred between consumers are defended to be one of the behaviors when consumers are engaged with brands (Brodie *et al.,* 2011; Van Doorn *et al.*, 2010).

Actually, in services, consumers share their space and time with other consumers and the way they behave on it influences their own and others consumers' overall experience (Moura e Sá and Amorim, 2017) whether it is for a more positive or negative overall experience (Rahman *et al.,* 2015), directly by interacting with that consumer or indirectly through their presence during the service provision (Wu 2007).

In addition, C2C interaction can occur offline as well as in an online environment, between a dyadic conversation or in a group setting (Libai *et al.*, 2010) and assume two valences: positive or negative depending whether the consumers' behavior is more collaborative and cooperative (and for instances help in anxiety reduction) (Harris and Baron, 2004) or more deviant/intrusive (Moura e Sá and Amorim, 2017).

More than a merely conversation, C2C interaction involves the exchange of information between two parties (one customer/ group of customers with other(s) customer(s) and could result in preferences modification, alter the actual purchase behavior or influence the form of relating with others customers (Libai *et al.,* 2010).

C2C interaction beyond its impact on firms' overall evaluation, it also important for the involved customers since the interaction could satisfy a need for sense of community and, per si represent a social motive that links people (Aubert-Gamet and Cova, 1999).

As a result of it, C2C interaction can be a powerful source of value (Gruen *et al.,* 2007) and nowadays, more than the functional and hedonic purposes a service is able to provide, consumers also look for the liking value they could retrieved from the service (Cova 1997; Aubert-Gamet and Cova, 1999). Actually, consumers want to fill their need of belongingness (Rahman et al., 2015) and interacting with other consumers is one of possible options they could take. The result of that interactions could be a more pleasurable experience when it goes well (Rahman *et al.,* 2015).

Since C2C interaction influences the service environment (Fakharyan *et al.,* 2014), more than an exogenous component of the service deliver, it should be looked as an endogenous part of the service so that it could be manageable (Rahman *et al.,* 2015).

To the date mainly two aspects were highlighted as influencing C2C interaction which include the service propensity for C2C interaction and the own characteristics of individuals (Harris and Baron, 2004).

Business in hospitality field such as hotels, airlines, events and theme parks (for example) are known to be prone for C2C interactions occurs (Fakharyan *et al.,* 2014; Rahman *et al.,* 2015) as a result of the service environment (Harris and Baron, 2004). Services where consumers have to spend a long time, for example waiting in long queues are prone to occur C2C interactions (Harris and Baron, 2004). In addition, service environment and atmospherics can facilitate the occurrence of interactions between customers (Moore *et al.,* 2005). Moreover, in air travels, considered "*prepurchase utilitarian services*" (Harris and Baron, 2004: 291), the quality of C2C "*will affect, and may even determine, the consumer experience*" (Harris and Baron, 2004: 291). Services where customers have to spend a lot of time are prone to CCI (Harris and Baron, 2004).

C2C interaction can be interpreted in the lens of roles theory which defends that customers assume different roles that motivates their actions. In C2C mainly three roles are assuming by customers: a helpsekeer (look for others' help to achieve his own goals), proactive helper (intents to help others voluntary) and reactive helper (if someone asks for his help, then he helps) (Yoo *et al.,* 2012)

2.2.3. Brand Experience

When consumers are purchasing a product, service they are no longer looking only for the tangible benefits they could retrieved from it but also the intangible/symbolic benefits such as experiences (Ong *et al.,* 2018). In this regard, brands are seen as not only functional value providers but also a mix between functional and experiential value delivered (Cleff *et al.,* 2014).

With experience being on tone of hot topics approached on literature, different conceptualizations of it emerged such as customer experience and brand experience (Ong *et al.,* 2018). While consumer experience is more related on how functional aspects impact consumers, brand experience is more focused on analyzing how brand affects consumers on different perspectives such as sensations, affection, behavioral and intellectual (Brakus *et al.,* 2009; Ong *et al.,* 2018)

Experiences are feel in different ways by consumers, they are unique and its evaluation is subjective to each consumer (Ong *et al.,* 2018).

Although brand experience is within a network of conceptualizations such "*as brand personality, brand involvement and brand attachment*" (Barnes *et al.,* 2014: 124), it differs from these concepts.

Brand experiences are the experiences provided by the brand to consumers' but also to non-consumers that can feel affected by it (Khan and Rahman, 2015).

The brand experiences are important because poor customer experience can result in business losses (consumers change for competitors) and better consumer's experiences results in higher levels of willingness to pay more for a product or service (RightNow Technologies, Inc., 2011). On the other hand, brand experiences can result in brand loyalty (Brakus *et al.,* 2009).

The main objective on the creation of experiences is to positively satisfy consumers, make them want to purchasing from our brand (loyal) and willing to pay more for our service (Laming and Mason, 2014; Khan and Rahman, 2015)

In the airline industry, not providing the most suitable experience in each touchpoint corresponds to business losses (Laming and Mason, 2014). Moreover, consumers in airlines are each time less loyal and for it, applying the experience could be one source of differentiate the business (Laming and Masson, 2014).

Brand experience is not limited to the experience in one touch point, rather it involves the cumulative experiences of each different touch points in different phases of the consumption journey either pre, during and post consumption (Laming and Mason, 2014). Outstanding experience should be provided in each touchpoint to distinguish brands (Laming and Mason, 2014). It implies that the brand experience is a result of a series of interactions occurred between the brand and the consumers (Jiang *et al.,* 2018)

Alongside the consumer journey, there are some common touch-point to every airline since some are not in the direct control of the company (such as the airport, the sizes of the aircrafts, among other characteristics) (Laming and Masson, 2014). "From booking, to check-in, lounge, boarding, in-flight, transfer, baggage, leaving the airport, etc…" (Laming and Masson, 2014: 16). "*the carrier's website, reservations, check-in, airport lounge, boarding and departure, cabin and seat features, crews and pilots, inflight food and drink and arrival*" (Laming and Masson, 2014: 18).

Brand experience can be divided into two different groups – direct and indirect brand experience. Consumers are exposed directly when they use the product, direct brand experiences, whereas indirect experiences occurred when consumers assist to communication brand materials in the diverse touchpoints (Brakus *et al.,* 2009)

The brand experience value is added to the perceived value of the brand that consumers already have, which contributes to their overall evolution of the brand (Jiang *et al.,* 2018).

It intends to create an emotional connection with the consumer whether he can use his senses to feel the experience (in offline environment) or in online environment whether the experience is created through audio, video or other (Cleff *et al.,* 2018).

Experiences are important since its overall expected quality determines whether the consumer engages emotionally or not (Suntikul and Jachna, 2016)

Experience was also mentioned as being a conductor of CE, Kumar *et al.,* (2017) argued that service experience of the customers leads to customer engagement. Actually, great

consumer experience drive recommendation and advocacy (that are considered higher levels when analysing consumer journey) (Roberts and Alpert, 2010).

The importance of this theme arises when investigators conclude that consumers are not only rational but also emotional individuals motivated by enjoyable experiences that shape their brand preference (Schmitt, 1999; Cleff *et al*., 2014). As a result of this, with their consumptions, consumers want to be entertained and to have fun (Schmitt 1999). In addition, brands are more than ever similar and it is hard for consumers to distinguish them based only on their functional value (Ebrahim 2016).

Experiential marketing allows brands to be closer of its consumers since they do have to understand them well to provide the kind of experiences they are looking for. Brands are no longer focused on the functional consumption per se, but also focused in providing the best experience to the consumer (Carù`and Cova, 2003).

According with Brakus et al., (2009), different experiences can emerge such as sensory (related with the experiences felt though our senses), affective (related with sentimental interactions), behavioural (related with actions taken by consumers who are enjoying the experience) and intellectual (the rational thoughts emerged by the experience).

In an era of experiential marketing, various types of experience emerge such as product experience, shopping and service experience, consumption experience and brand experience (Brakus *et al*., 2009). What distinguish all types from brand experience is that this one is the experience feel by consumer when exposed to brand-related stimulus (brand colours, logo, shapes, among others) (Brakus *et al.*, 2009). Moreover, experiences also vary in strength, intensity, valence and spontaneously vs deliberated (Brakus *et al.,* 2009).

The experiences can be felt in different realms depending whether the consumer is more connected with the environment per si (esthetic), with the joy (entertainment), acquire knowledge/expertise (educational) and fully involved in the experience (escapism) (Pine and Gilmore, 1998; Suntikul and Jachna, 2016)

Brand experiences are not limited to one of the phases of consumption, rather they can have accompanied the consumer alongside the pre-purchase, purchase and pos-purchase consumer behaviour (Carù and Cova, 2003). In this regard, different types of consumptions experiences can emerge such as Carù and Cova (2003) stated – "*pre-consumption experience*" (Carù and Cova, 2003: 271) (when the consumer is evaluating the possible brands' alternatives

and imagine the experience he could get from each), "*purchase experience*" (Carù and Cova, 2003: 271) (what is involving the experience, the choices of the consumer for that service/product), the "*core consumption experience*" (Carù and Cova, 2003: 271) (encompasses the sensations felt) and the "*remembered consumption experience*" (Carù and Cova, 2003: 271) (the memory of the experience).

Sum up of brand experience

Brand experience is, therefore, defined as "*subjective, internal consumer responses*" (Brakus *et al.*, 2009: 53) that can be experienced in *"sensory, affective, intellectual, behavioural and social terms"* (Brakus *et al.*, 2009). Brand experiences have a complete lifecycle that begins before the phase of purchasing and ends in consumers' memory (Brakus *et al.*, 2009; Ebrahim et al., 2016).

2.2.4. Brand Love

Brands are part of consumer's days; in every situation, consumers cross themselves in, at least, one brand. Understanding how consumers create a deep emotional bond with companies, to preserve sustainable customer relationships, turns therefore crucial. The love brands are considered irreplaceable, the relationship is deep and enduring in time (Albert and Merunka, 2013) and there is a rejection for competitors (Bairrada *et al.*, 2018)
Emotional connection is the key in creating intense consumers' responses (Long-Tolbert and Gammoh, 2012). This affective tie is only possible if a consumer does feel a psychological connection with the brand (Albert and Merunka, 2013).

Emotional attachment connections was many times used to define brand love, for instances, Carroll and Ahuvia (2006) defined brand love as "*a passionate emotional attachment a satisfied consumer has for a particular trade name* (Carroll and Ahuvia, 2006:81) and Aro *et al.*, (2018) "*the emotional attachment of a satisfied consumer toward a brand, which can be formed and become apparent in different ways for different persons but which typically includes identification with a brand to some degree*" (Aro *et al.*, 2018: 73)

Brand love results from the long-term relationship with a brand, with a focus on affective component and the integration of the brand on consumers' identity. (Carroll and Ahuvia, 2006). It is composed by positive and strong emotions experienced by consumers when using a brand (Long-Tolbert and Gammoh, 2012; Langner *et al.*, 2015).

More than being merely brands, without meaning, brands are being perceived as relationship partners (Fournier, 1998). In the perspective of the consumer-brand relationship, consumers do create a relationship with some brands because, brands add meaning to their lives which, therefore, contribute to the individuals' self-concept (Fournier, 1998). Objects loved by consumers are seen as part of themselves and consequently "*loved brands occupy a central role in people's lives*" (Bairrada *et al.,* 2018: 658).

In consumer-brand relationship there is an interdependence between the consumer and the brand that can both, through their actions, influence the relationship form (Fournier, 1998). The existence of reciprocity is fundamental in brand love (Langner *et al.,* 2015).

Some authors consider that satisfaction is a pre-requisite of brand love and when it is fulfilled if a consumer feels a passionate emotional attachment for a brand, then he loves it (Carroll and Ahuvia, 2006).

In addition, brand love encompasses passion and emotional attachment. On one hand, passion reflects the excitement a brand causes on individuals, whereas emotional attachment is an emotional bond that the individual creates with the specific object (and when separated can result in separation distress) (Thomson *et al.,* 2005).

Brand love evaluate over the time, expectations become more realistic and the rational aspect of a relation gains more importance (Huber *et al.,* 2015).

In brand love relationship, consumers expect to receive concrete rational benefits whether they are outstanding "*product quality, good price-performance ratios or reliability of the loved brand*" (Langner *et al.,* 2015: 627). Rational aspects (such as the functional) and emotional ones contribute to individuals love for a brand (Huber *et al.,* 2015) and therefore keep them in a long-term relationship. The benefits that a consumer gets from a brand (functional and emotional) are expanded when the brand is perceived as being different from others (Bairrada *et al.,* 2018).

Actually *"consumers love brands that are superior on one or more qualities*" (Bairrada *et al.,* 2018:65)

However, not every consumer falls in love with a brand at the first sight, as in interpersonal relationships, there are different patterns of consumers' brand love. Some consumers fall in love with the brand very quickly, meanwhile, others take their time up until

fall in love (Langner *et al.*, 2016). However, what is consensual is that positive experiences do positively affect brand love (Langner *et al.*, 2016). For that reason, beyond offer excellent products, brands also need to provide extraordinary product experiences (Langner *et al.*, 2016).

Brand love is characterized for having different stages (Barker *et al.*, 2015) that vary in intensity (usually from more intensity to low intensity) over the time (Huber *et al*., 2015).

Self-expressiveness was highlighted as the main factor responsible for brand love in inner and social self (Huber *et al.*, 2015). Inner self in the way that the brand mirrors the individuals own identity (Huber *et al.*, 2015) and social self represents the extent to which a brand is able to express individual's personality in their social environments. (Huber *et al.*, 2015).

There is an ordinary course of relationships that evaluate to a deeper and stable relationship (Huber *et al.*, 2015). Alongside with the evolution of the relationship, other attributes that were not initially noted begin to be taken in consideration (Huber *et al.*, 2015).

The theory of triangular love in interpersonal relationships is widely used, in parallel, to explain consumer-object love - brand love (Long-Tolbert and Gammoh, 2012). In this theory, three components are highlighted as being the main responsible for love – liking (counter part of intimacy), yearning (counterpart of passion) and decision/commitment. The liking component encompasses the feeling of closeness and connectedness to an object, the emotional basis of relations, the yearning including the strong desire for an object, the motivational component and the decision/commitment which comprises the cognitive aspect, the recognition of love and the desire to keep that love in the long-term (Shimp and Madden, 1998). The third component, decision/commitment, is what distinguish love relationship which is more complex and long-lasting against love emotion which is single and episodic (Batra *et al.*, 2012).

However, others authors defend that brand-love relationship does not occur in the same way as in personal relations (Langner *et al*., 2015). Actually, Langner *et al*., 2015 pointed out that the emotions experienced in a consumer-brand love per se could not have the same qualities as in interpersonal love. The reason why this happens is because both types of love activate different parts of consumer's brains and then resulting in less intensive arousal and less positive emotions (in consumer-brand love versus interpersonal love). In opposition to interpersonal relationship, in brand love consumers' do value more the rational components of the brand versus the emotional aspects valued more in interpersonal relationship (Langner *et al.*, 2015).

Others perspectives in consumer-brand relationship were formed such as Fournier (1998) in which the brand relationship quality depends on six dimensions that include passion, intimacy and commitment (as in the theory of triangular love) (Fournier, 1998).

Batra *et al.,* 2012 conceptualize other theory that explain how consumers' feel love with brands including passionate desire (consumers want to use the brand and invest their resources with it), integration of the brand in their identity (whether actual or desired identity), positive affection, anticipated separation distress, desire to maintain the relationship in long-term attitude valence and strength.

In the previous studies, various antecedents of brand love were considered such as: hedonic products (the primary benefit is fun, pleasure, the benefit is more symbolic) per opposition to utilitarian ones, self-expressive brands (Carroll and Ahuvia, 2006; Karkaluoto *et al.,* 2016), brand trust (Karkaluoto *et al.,* 2016) gratitude, partner quality, social support (in services) (Long-Tolbert and Gammoh, 2012), brand global identification and brand trust (Albert and Merunka, 2013). When it comes to consequences, a small number were referred such as brand loyalty (Carroll and Ahuvia, 2006; Bairrada *et al.,* 2018), positive word of mouth and willingness to pay premium (Albert and Merunka, 2013; Bairrada *et al.,* 2018).

Sum up of brand love

Brands cross consumers' path in every situation, although, not all of them are able to be strongly emotionally connected with the consumer (Long-Tolbert and Gammoh, 2012) that he considered it irreplaceable (Albert and Merunka, 2013) that is brand love.

Brand love is usually connected with self-expressiveness, the way it can exhibits inner and social selves (Huber et al., 2012), it is compared to interpersonal love (Long-Tolbert and Gammoh, 2012) and it results in deep relationships (Albert and Merunka, 2013).

2.3. Consequence of consumer engagement

2.3.1. Co-creation

With a new landscape composed by thousands of new communications channels with consumers and thousands of new competitors fighting for the same market space, the only possible way to survive is through interactions with consumers (and let them interact with the company).

It does not only change the way companies used to do business and communicate (from one-way communication for two-way interaction) but also, the way the companies and market interpret what is value (Ramirez, 1999; Vargo and Lusch, 2004).

In the industrial era, consumers were seen as value destructors since they were responsible for decreasing the value that was created by the producer (Ramirez, 1999). The value was attributed to the product created solely by the producer and it is used by the consumer (Ramirez, 1999). With the emergency of service-dominant logic (S-D), there are a revolution in the way of doing business since the core of value passes from products to services its implies some changes such as interactions between service provider and the consumer become the core the service exchange (Mathis *et al.,* 2016). To realize the service, the producer as well as the consumer need to invest their resources whether their expertise, time, money, for example (Delpechitre *et al.,* 2018). The value rather than being attributed is determined based on the use of it (Vargo and Lusch, 2004). This implies an interdependence between parties that together co-create the service.

Nowadays, we have been living in an era of experiences and collaborative economy, in which the value proposition of the companies is on what experiences is it able to provide to the user (Shaw *et al.,* 2011; Hilton *et al*., 2012; Fernandes and Remelhe, 2016; Buonincontri *et al.,* 2017) and, also on interdependence of relationships create together experiences (Gronroos, 2012).

In both perspectives in mind, value co-creation was defined as "…*a joint, collaborative, concurrent, peer-like, process of producing a new value, both materially and symbolically, through the voluntary contributions of multiple actors…*" (Busser and Shulga, 2018: 70)

With the changes in the core of what is value perceived, the way producers and consumers produce it also change and different conceptualizations arise alongside the path. The value as it could be seen from the previous market's tendencies passes from the products, to services and from this one to experiences (Buonincontri *et al.,* 2017).

For instances, some experts distinguish between co-creation of value and co-production (Vargo and Lusch, 2004) of value, others separate value from co-creation and co-creation behavior (Delpechitre *et al.,* 2018) and also, customer-to-customer co-creation (Lin et al., 2018). With all of these conceptualizations emerging, the extension on what is one and what is not, is not clear due to date (Ramaswamy and Ozcan, 2018).

Co-production was defined as the process that occurs before and during the usage experience, where co-creation was defined in terms of the outcome, the consequence of the experience has on the user (Hilton *et al.,* 2012). While the first one (co-production) is more objective as it is usually related with the design of new products, services (Mahr *et al.,* 2014), customize products (Franke and Piller, 2004), learning more about the products and services and provide solutions (Hakanen, 2014). The last one (co-creation) is more subjective and depends on the individual evolution of each person (Hilton et al., 2012), in which the value is determined by the user (Harkison, 2018). When consumers are involved with producers in the social exchanges, they are building meaning for the process which is mentioned to be one part of co-creation of value (Busser and Shulga, 2018).

However, in the majority of the literature co-creation and co-production are used as synonyms (Hilton *et al.,* 2012).

As a result of this, co-creation of value is defined as a situation in which "…*the value is not simply added, but it is mutually created and re-created among actors with different values…" (*Ramirez, 1999:50). Different actors interact to create value and although producers and consumers are the most mentioned in the field of co-creation of value, also consumers among themselves and brand communities can be a source of value (Lin *et al.,* 2018). In this perspective, both producers and consumers (the most mentioned actors) are linked and need to make the necessary adjustments to both win from the situation, they collaborate (Busser and Shulga, 2018). In this regard, companies need to implement the necessary management opportunities for consumers to interact in the process (Harkison, 2018), whether, consumers have to decide to invest on the opportunity given by the companies and jointly create with the company (Harkison, 2018). From co-creation perspective, each actor is an important contributor that should have an active role which is based on collaborative interactions (Gronroos, 2012; Busser and Shulga, 2018). Beside this positive valence, in which consumers add and receive value from the company, there is also a negative valence when for instances, consumers are negatively intent (Plé and Cáceres, 2010). The valence of co-creation depends on which actor views (for example) making a negative review for a consumer can be satisfactory but for the company can be examined in terms of value destruction (Plé and Cáceres, 2010; Hollebeek *et al.,* 2013).

Actually, consumers decide, in collaboration with the company, to create value based on their motivations and benefits they could retrieve from that interaction (Kaufmann *et al.,*

2016). So, as example, with that interaction consumers can satisfy their needs (to be heard by the company, to have an active voice on the decision process, to feel that belong to the community (Piller and Ihl, 2009; Nambisan and P.Nambisan, 2008; Busser and Shulga, 2018), feeling of accomplishment (Fernandes and Remelhe, 2016; Busser and Shulga, 2018), socialize (Busser and Shulga, 2018), feeling of recognition (Shulga and Busser, 2018), express their inner self (Fernandes and Remelhe, 2016) and also improve their skills/knowledge (Lin *et al.*, 2018).

Consumers are different and, consequently, different value emerges from their interaction with the company. However, different consumers' characteristics for an effective co-creation process were mentioned such as: enough familiarity, time, competences and the desire to take part of the process (Suntikul and Jachna, 2016; Im and Qu, 2018). In addition, the value created during the process depends on consumer participation, involvement (cognitive and emotional), engagement, commitment and what therefore he exchanges with the company (Suntikul and Jachna, 2016; Mathis *et al.*, 2017; Im and Qu, 2017; Harkison, 2018; Delpechitre *et al.*, 2018; Busser and Shulga, 2018). When there is an integration of consumers on the process and also they feel involved on it, the value attributed is superior (based on the perspective that the value is subjective to each consumer) (Suntikul and Jachan, 2016).

Moreover, in the co-creation process, also companies benefit from these interactions by having part of the activities that traditionally were fully its responsibility and now they just have a partial responsibility since consumers has the other part (Delpechitre *et al.*, 2018). As examples of activities that are partially attributed to the consumers, it is possible to highlight search company's information, spread it and influence others' opinion (brand advocacy), provide suggestions, new ideas, exposure of company's problems they are facing and forgive company's errors (Chen *et al.*, 2011; Delpechitre *et al.*, 2018). As a result of this, co-creation of value for represents a source of competitive advantage against competitors (Lin *et al*., 2018).

Co-creation was mentioned to incorporate five main characteristics which are: meaningfulness, collaboration, contribution, recognition and affective response (Busser and Shulga, 2018). The meaning is attributed by consumers to the process when they are actively involved on it (meaningfulness)(Busser and Shulga, 2018). Collaboration means that companies are no longer doing marketing communications to achieve specific consumers, rather they are working in partnership with consumers to do marketing with them (Busser and Shulga, 2018). Contribution is in parallel with resources integration of service-dominant logic (Vargo and Lusch, 2016; Busser and Shulga, 2018), in which, consumers/other actors as well

as companies invest their resources to achieve mutual benefit. Moreover, consumers also look for social value created through interactions which is represented by the recognition (Busser and Shulga, 2018). Finally, consumers judge companies in terms of the emotional value they could retrieve and invest (Busser and Shulga, 2018) (affective response).

Sum up of co-creation of value

Co-creation of value, as the name suggests is the creation of "something" resulting from more than one party involvement (Co) (Lin *et al.*, 2018) that tends to result in a "win-win" situations (Harkison, 2018).

3. Research development & hypothesis development

In this part of the thesis, the hypothesis which are based on the previous research of literature review are proposed and a conceptual model is presented. The hypothesis formulated are going to be tested on the methodology. The conceptual model shows the paths between the conceptualizations.

3.1. Antecedents of consumer engagement

3.1.1. Atmospherics in-flight characteristics

Atmospherics characteristics have been studied as they are known for affecting the way consumers evaluate company's offers and how they impact the consumers' behavior (Han and Hwang, 2017).

In different contexts among different industries, the study of different atmospherics variables varies (Winterm and Chapleo, 2017; Ellen and Zhang, 2014; Ali and Omar, 2014; Loureiro and Fialho, 2016; Rollo and McNeil, 2009).

There is also a variation of the study of different atmospherics variables inside the same industry, for example in airlines (Kim *et al.,* 2016; Loureiro and Fialho, 2016). By differentiating the offer through alter atmospherics conditions, companies could be perceived as different from the competitors as the market get competitive (Han and Hwang, 2017). Moreover, in airlines, it was noticed that if an innovation is introduced in the plane that customers enjoy then, consumers consider to change for that airline (Loureiro and Fialho, 2016).

For example, Kim *et al.,* (2016) discovered that in-flight characteristics such as food, entertainment, physical environment, crew in-flight performance and crew in-flight appearance result in perceiving the airline as more innovative. Air quality, temperature, odour and noise were studied in the way that impact behavioral intentions (Han and Hwang, 2017). Loureiro and Fialho, (2016) found that satisfaction and trust are influenced by in-flight characteristics.

In line with the previous research, this research analysis in-flight experience into five characteristics: air quality, temperature, odour, noise and crew (Loureiro and Fialho, 2016). Moreover, the crew in-flight as a result of their direct contact with flight passengers could use a friendlier approach so that create ties with passengers and make them emotional linked to the

airline (Loureiro and Fialho, 2016). Actually, the overall atmospherics (the stimulus presented to the consumer), when pleased by consumers are responsible for positive reactions (Garaus, 2016).

According with this, if the changes in the environment are agreeable for consumers and moreover if the crew could improve emotional ties with consumers, then, all the atmospherics in-flight characteristics are able to impact the engagement (the influence of consumers on firms' value expressed through their behavioral responses).

H1 - In-flight characteristics (air quality (H1a), temperature (H1b), food (H1c), layout (H1d), crew(H1e), odor (H1f)) have a positive impact on consumer engagement which encompasses lifetime value, referral value, influence value and knowledge value.

3.1.2. Customer-to-customer interaction

Customer-to-customer (C2C) interaction is referred as the interactions occurred between customers in the service context (Fakharyan *et al.*, 2014).

Consumer engagement with brands depends on the experiential value, which is influenced by the service environment that includes others customers and, more specifically, could include customer-to-customer interactions. In addition, there are businesses that are more prone to occur C2C interaction such as the ones in which the customers have to spend a lot of time (Harris and Baron, 2004). For example, during the flights (whether shorter or longer) consumers have to wait, to spend time on it.

As defended by Rahman *et al.*, (2015) during the experience, consumers frequently talk and the topic of the conversations could be associated with the brand such as the service received or the product package they have acquired (Rahman *et al.,* 2015) or non-associated with the brand for example about private settings (Rahman *et al.,* 2015). Depending on the topic of the conversations, C2C interactions could result in enhanced value for companies' (Guen *et al.,* 2007; Rahman *et al.,* 2015)

There different types of interactions regarding the service experience whether they could be planned or non-planned C2C interactions (Parker and Ward, 2000) and also, expected or non-expected (Loureiro and Fialho, 2016).

When comparing C2C interactions during and after the experience, the results exhibits that during the experience interactions are more influential than the after the experience (Rahman *et al.,* 2015).

If other customers are present in the flight, there is an opportunity for them for interact including opinion's exchange on the experience they are having with the brand or brand's themes which implies consumers' effort to think about that company and therefore lead to engage with brand's themes.

H2 - Customer-to-customer interaction (H2) have a positive impact on consumer engagement, that is composed by lifetime value, referral value, influence value and knowledge value (H2d).

3.1.3. Brand Experience

Experiences are revolutionizing the way companies are making their value propositions. Customers want to be surprised, to be involved by experiences rather than solely acquiring a product/service (Ong *et al.,* 2018). The idea of providing a brand experience comes in parallel with the idea that individuals are not exclusively rational, they are also emotional individuals who want to have fun, to be entertained (Schmitt, 1999; Cleff *et al.*, 2014).

Therefore, brands play a crucial role by creating different experiences in the different consumers' touch-points (Laming and Mason, 2014). An ongoing desire to keep a relationship with a brand is nurtured when brands are able to provide memorable experiences (Dwivedi *et al.,* 2018). Companies want to provide the best experience that most fit to consumers' needs while consumers can also contribute to the firm through their feedback, for example, as a truly relationship of interdependence (Pansari and Kumar, 2017).

As a result of brand investment in experiences, consumers begin to perceive them as partners, which results in individuals' disposition to invest their own resources with it (Dwivedi *et al.,* 2018). Experiences are unique to each individual, they emerge as response to brand stimulus and are characterized by its subjectivity (Brakus *et al.,* 2009). Therefore, different stimulus result in different responses which can incorporate: sensorial, affective, behavioral or cognitive dimensions (Brakus *et al.,* 2009). The impact that brands experiences have on consumer is indisputable, from a willingness to pay more (RightNow Techonologies, Inc., 2011; Laming and Mason, 2014; Khan and Rahman, 2015) to become loyal (Brakus *et al.,* 2009).

The experience felt by the consumer as a reaction to a stimulus is memorable and when he enjoys it, he desires to keep a relationship with the brand, consumer engages with it.

H3 - Brand experience (Sensory (H3a), affective (H3b), intellectual (H3c) and behavioral (H3d) has a positive impact on consumer engagement which encompasses lifetime value, referrals value , influence value and knowledge value.

3.1.4. Brand love

To be in love with a brand is to have a strong emotional linkage to it (Carroll and Ahuvia, 2006; Albert and Merunka, 2013).

The brand should be able to make the individual excited and connected (Thomson *et al.,* 2005) in the way that individuals incorporates that brands on their own identity (Carroll and Ahuvia, 2006; Batra *et al.,* 2012).

That strong emotional connection with a specific brand make consumers more resistant to switch from that brand to other since love brands are considered to be irreplaceable (Albert and Merunka, 2013), they are more prone to act as brand advocates (expressing the opinion as the brand was theirs and discuss its benefits in their conversations) (Pansari and Kumar, 2017; Bairrada *et al.,* 2018) and to pay more for a product/service of the loved brand and mention it on their conversations (Bairrada *et al.,* 2018)

Brand love is usually compared to the interpersonal theory of love (Long-Tolbert and Gammoh, 2012). However, both types of love vary in the way that personal love is reciprocal, whether brand love is only feel from consumer to the brand (Islam and Rahman, 2016a). Moreover, in brand love individuals look for a brand that is superior in functional characteristics rather than, based their love on the emotional connection (Batra *et al.,* 2012). Individuals who love a brand have a strong emotional connection to it which is, therefore is exhibited with their investment of resources (Batra *et al.,*2012).

Individuals who love a brand, beyond their emotional connection, express their love through their behavioral actions such as regularly use and interact with it (Batra *et al.,* 2012).

With the objective to see if a strong emotional connection, thus brand love, is translated in a desire to keep a relationship with the brand, to be engaged with it, the following hypothesis was made:

H4 - Brand love (H4) positively impacts consumer engagement which encompasses lifetime value, referrals value, influence value and knowledge value.

3.2. Consequences of consumer engagement

3.2.1. Co-creation of value

Alongside the literature, co-creation or co-created value was mentioned to be one of the outcomes of customer engagement (Brodie *et al.,* 2011; Hollebeek, 2011D; Jakkola and Alexander, 2014; Hollebeek *et al.,* 2016).

The main objective on co-creation of value is to achieve satisfactory results for all involved parties (Busser and Shulga, 2018).

From a perspective in which the value was determined by the producer, to a perspective in which the value is determined by the user and its subjective interpretation of it.

Value co-creation emerges with the increasing importance of collaborative economy (rather than competitive) in which the interdependence relationships can be translated in a win-win situation.

Co-created value is a subjective evaluation, on consumers' mind, of the value mutually created as a result of mutual efforts (Fernandes and Remelhe, 2016). This in consumers' perspective.

Taking the companies' perspective, the value is only co-created when there are multi-actors contributing rather than, one specific actor in relationship with the firm (Vargo and Lusch, 2016). Regarding fundamental proposition 6 of value creation "*Value is cocreated by multiple actors, always including the beneficiary*" (Vargo and Lusch, 2017:9).

Actually, when consumers co-create, they expect that the value create should be increased for themselves but also for all of other parties involved (Busser and Shulga, 2018).

It is characterized by active voluntary participation (Van Doorn *et al.,* 2010). What distinguish consumer engagement from co-creation is that on the first one, consumers have their own objective in mind rather than companies' objectives (Fernandes and Remelhe, 2016).

Co-creation is possible through the interactions that the actors could have in relation with the firm, no matter if personal or virtual interactions (Vargo and Lusch, 2017).

Consumer engagement is characterized by its strong psychological connection (Hapsari *et al.,* 2016), relationship of interdependence (Resnick, 2001), with regular interactions (Brodie *et al.,* 2011; Hollebeek *et al.,* 2014) and the basis for it to keep a relationship with the firm.

When consumers maintain a relationship with it, it is natural that they invest resources on that relationship whether time, money, knowledge which, therefore, results in transforming/ improving the offerings of the company. As a result of it the following hypothesis is formulated:

H5 - Consumer engagement (lifetime value (H5a), referral value (H5b), influence value (H5c) and knowledge value (H5d) positively relates to co-creation of value which encompasses meaningfulness, collaboration, contribution, recognition and affective response.

4. Conceptual Model and hypothesis development

The following section presents a conceptual model which exhibits the proposed relationships between consumer engagement and the chosen related concepts reviewed in the literature. The chosen concepts were selected based on the expectation of their association with the consumer engagement.

Based on the literature review which was sustained by the previous research, the following hypothesis are formulated, explained above and ready to be proved one the next section (methodology). The conceptual model (figure 3) that exhibits the proposed paths taken by consumers that results in engagement of the consumer and therefore in co-creation of value to the company.

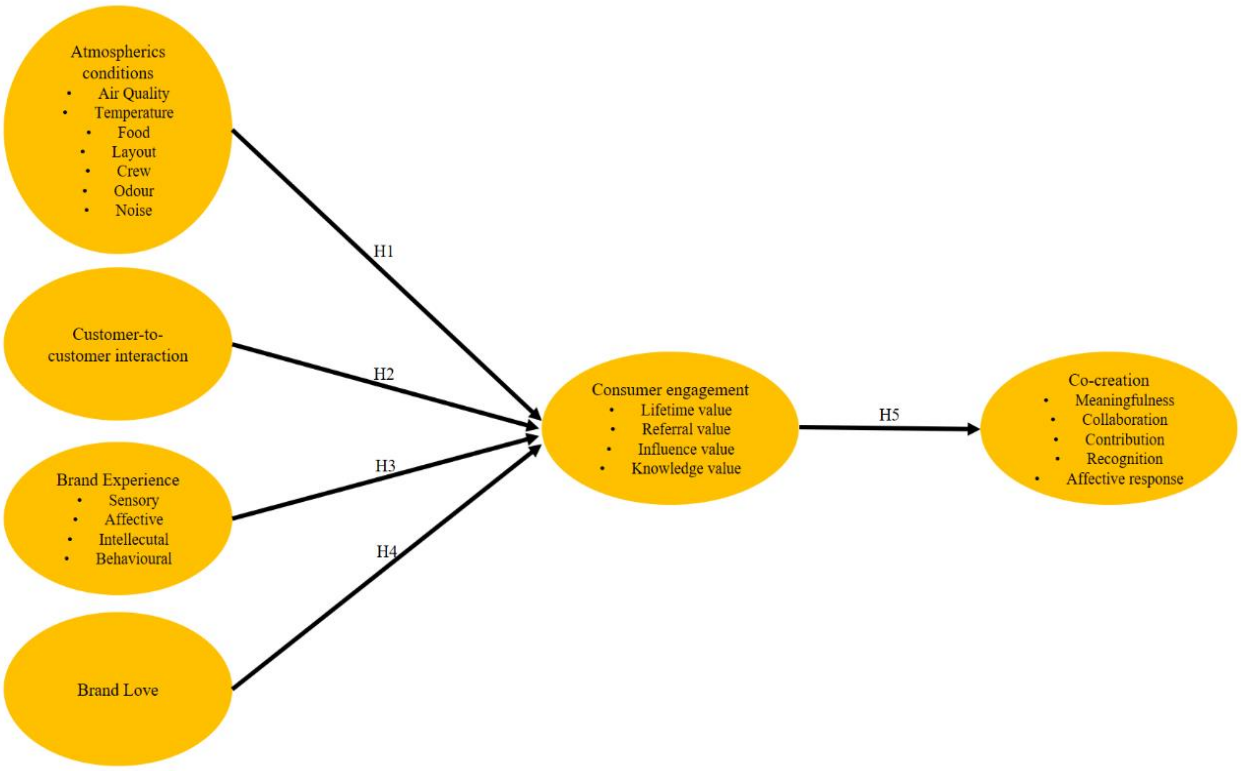


FIGURE 3 - PROPOSED CONCEPTUAL MODEL

Source: Own elaboration

4.1. Drivers of consumer engagement

4.1.1 Atmospherics in-flight characteristics

H1a – Air Quality is positively related with consumer engagement

H1b – Temperature is positively related with consumer engagement

H1c – Food is positively related with consumer engagement

H1d – Layout is positively related with consumer engagement

H1e – Crew is positively related with consumer engagement

H1f – Odor is positively related with consumer engagement

H1f –Noise is positively related with consumer engagement

4.1.2 Customer-to-customer interaction

H2 – Customer-to-customer interaction is positively related with consumer engagement

4.1.3 Brand Experience

H3a- Sensory is positively related with consumer engagement

H3b – Affective is positively related with consumer engagement

H3c – Intellectual is positively related with consumer engagement

H3d – Behavioural is positively related with consumer engagement

4.1.4 Brand Love

H4 – Brand love is positively related with consumer engagement

4.2. Consequence of consumer engagement

4.2.1. Co-creation as a consequence of engagement

H5a – Consumer engagement is positively related with meaningfulness

H5b – Consumer engagement is positively related with collaboration

H5c – Consumer engagement is positively related with contribution

H5d- Consumer engagement is positively related with recognition

H5e- Consumer engagement is positively related with affective response

5. Research approach and results

5.1. Methodology

In this section, the general methodology used will be described with the objective to answer to the research questions and objectives of this study, and to test the previous developed hypothesis. After the literature review that encompasses what drives consumers to be engaged with brands and outcome of engaged consumers in phase that consumers perform a much more active role in the purchase process, this methodology was developed. It was verified that besides the importance of engaged customers on company's outcome, there is a gap in the literature that intends to conceptually and empirically explains what drives consumers to be engaged with brands regarding the atmospherics conditions, interactions between consumers, brand experience and brand love and resulting in a co-creation process with airlines companies. With the chosen methodology, the research objectives can be attained which are:

- Identification of the antecedents and consequence of consumer engagement.
- Compare results between low cost and flag users' carrier.
- Analyze the drivers from the set have the greatest impact on the process of engagement with airlines.
- Explore the co-creation process as a consequence of engagement.
- Understand whether engagement performs as a mediator between the proposed drivers and the outcome.

This dissertation follows an explanatory research since it intends to explain the existent causality, the relationship between events, variables (Sarstedt and Mooi, 2014) and, therefore explain a problem (Saunders, Lewis and Tornhill, 2009) To study that causal relationship between variables, a quantitative research approach was followed, which was a survey that intends to statistically examine the assumptions.

The questionnaire was distributed face-to-face and in paper so that more than one person can be answering simultaneously and to ensure that the samples could be as larger and diverse as possible.

5.2. Collection of the data

In this section, as the title suggests it will be explained how the quantitative data was collected. An overview of the process is exhibit in the figure 4.

FIGURE 4- DATA'S COLLECTION TIMEFRAME

Source: Own elaboration

5.2.1. Initial literature review

To recap the process up until now, initially the literature revision was conducted to better understand the concept of consumer engagement. More specifically, the main objective of this phase of the process was to understand the different perspectives that consumer engagement has, what are the proposed antecedents and consequences for this construct and the roots of consumer engagement. Then, accordingly with the findings, it was delineated a model in which the engagement antecedents would be atmospherics characteristics, customer-to-customer interaction, brand experience and brand love and the consequence of engagement would be co-creation of value.

5.2.2 Examination of the existing scales

After this is established, the existing scales to measure these constructs were evaluated and for each construct a scale that better can reflect the conditions that occur during the flight was selected.

5.2.3 Questionnaire design and pre-test

The questionnaire (consult appendix A4) was established in the way that allow to study each construct theorized in the proposed model. To be easier for the reader to answer it, it was divided in 12 parts, the first part is an introduction to the questionnaire (explaining what is the

purpose of the survey respondents' are answering for) and, also asks respondents which was the airline they most used in the last 3 years (since respondents that hadn't travelled, could not participate in the survey), the other 10 parts contains a set of statements in which respondents are asked to put an "X" in the measure that most represents their situation (regarding the previously mentioned airline and it has as main objective to measure the each of the selected constructs that allows to conclude to the research question, objectives and hypothesis) and the last part, ask respondents about their general information so that the respondents' profile can be traced. Note that, although the questionnaire was based on the previous existing scales, small modifications in items were made to ensure that these items could exhibit the airlines industry.

As explained previously, the items were based on the existing scales, table 1 that contains the source of the measurement scales (consult appendix A.6 that contains a list of each construct, the items and the source)

The constructs atmospherics in-flight characteristics, customer-to-customer interaction, brand experience, consumer engagement and co-creation of value were measured on 5-point likert-scale from Strongly Agree to Strongly Disagree. Brand Love as suggested by the authors (Bagozzi *et al*., 2017) was measured on a 5-likert-scale from "very much" to "not at all" with a "moderately" as midpoint except the last item of this construct that also, as suggested by authors vary from 1 "Negative" to 5 "Positive" (consult appendix A.3, the survey).

Construct	Source
Atmospherics in-flight characteristics	Loureiro and Fialho, 2016
Customer-to-customer interaction	Gruen *et al.*, 2007
Brand Experience	Brakus *et al.*, 2009
Brand Love	Bagozzi *et al*., 2017
Consumer engagement	Kumar and Pansari, 2016
Co-creation	Busser and Shulga, 2018

TABLE 1 - SOURCE OF THE MEASUREMENT SCALES

Source: Own elaboration

The questionnaire was delivered in two languages: English (for non-Portuguese speakers) and in Portuguese (for Portuguese speakers). Initially designed in English as the scales measurement were in that language and, afterward, it was translated to Portuguese so that Portuguese people can easily understand it.

Before the survey was delivered and spread out, a pre-test was carried on from 20th March to 30th of March in which 20 questionnaires were gathered. The main objective of this pre-test was to ensure that the respondents do understand the question and the respective scales. Initially, for this pre-test Brand Love was measure on the same 5-Likert-scale from "Strongly agree" to "Strongly Disagree" than the others constructs. Regarding that the most participants, do not understand the items when using this 5-point Likert-scale, the scale measurement was changed to the original suggested by the authors also on 5-point Likert scale but from "very much" to "not at all". Moreover, participants also did have doubts on some concepts they were asked about (for example co-creation). As a result of it, short descriptions were inserted on the blocks of the survey to make easier for the respondents to understand what were they being asked about.

These were the only changes made to the questionnaire. Since there were differences between the scale of this pre-test and the scale used in the final version of the survey, these pre-tests were not considered on the data basis.

After this change, the final version of the questionnaire was distributed to 10 people to ensure that now everyone can understand the scales of the items, the items and the concepts they were asked about. This test run successfully, there were no necessary changes to be made.

Then, the questionnaire was spread out to every person that accepts to fulfill it. Although, the extension of the questionnaire has been very commented by the participants, any items were removed since each of them were completely need to analyzes each of the proposed construct.

5.2.4 Literature review – Recent updated articles

During this part of the literature review, on each two weeks, it was searched if there is any new article on the "consumer engagement" topic or related with the others constructs used in this thesis, that can bring some new information to be added to the previously suggested revision. In cases, that a new article with relevant information were found, the information was added to the thesis.

5.2.5. Data collection

The survey was distributed in a face-to-face approach, using a paper based tactic so that more than one person could answer it at the same time. Frequently, people in groups and couples

were the preferable targets so that they could not be afraid of someone strange to interrupt. People alone were normally less opened to answer to the questionnaire since they did not even want to listen what was the proposed of the approach. The survey was thinking about being distributed at the airport, in the entrance but since it was need authorization and it was not conceded (since any answered to email sent was received, consult appendix A.5), then other locations were chosen. Regarding that, many tourists want to visit the most well-known monuments of Lisbon and since one of the stops of the sightseeing bus (which transport many people) were in Belem, Belem was the city to be distribute the questionnaire. As a result of it, during the month of May/June, the survey was distributed in Belem and the nearby zones in which it was possible to find many tourists but, also, many Portuguese people. One or more questionnaires were distributed, then wait to that persons to answer it to ensure that everyone answers to every questions of the survey since one question not answered can compromise the results.

After, gathering the questionnaires of that day, all of the questionnaire were numerated and the results passed through an excel spreadsheet (that, beyond the questions of the survey also has a column with the number of the questionnaire). Then, to confirm that any failures due to the transposition of the answers from paper to computer exists, it was confirmed by the numeration of the questionnaires that every paper-survey is totally equal to the values on the spreadsheet.

6. Data Analysis

6.1. Data preparation and treatment

Every survey was placed on the spreadsheet regardless if it is completely or not. Secondly, the incomplete questionnaires with answers missing were deleted, in a total of 8 questionnaires.

Since the respondents answered the questions of the survey by selecting "strongly agree", "agree", "neutral", "disagree" and "strongly disagree" (in all constructs excepted in brand love), these were the nomenclatures used in the excel spreadsheet (when passing the information from the questionnaire to the excel). Afterwards, the reverse-scale items identified by the original authors of the measurement scale were marked up with an "R" in the line before the item. Non-reverse scale items were coding in the following way: "strongly agree" was substituted with a 5, "agree" with a 4, "neutral" with a 3, "disagree" with a 2 and "strongly disagree" with a 1. Reverse-scale items, were coding in the opposite way meaning that "Strongly agree" was substituted with 1 and the others answers with the same logic. This procedure was made before any statically analysis in SPSS.

In terms of the answers corresponding to the first part of the questionnaire, regarding the airline used in the last 3 years and the final part of the questionnaire regarding general information about the respondent, the coding used was different. For instances, it is available on the appendix A.6. Note that, in the first question respondents were asked about the airline they most used in the last three years, in which they answer the name of the airline. Regarding the name of the airline they mentioned, a transformation for low cost carrier or flag carrier was made, so that the data can be threated statistically.

To proceed with the statistically analysis, IBM SPSS Statistics 23 was used. The first step before conducting any tests is to determine the type of variables it was dealing with.

6.1.1. Measuring scales on SPSS

With the objective of go along with the statistics analysis, it is important to understand what type of measure scale it was used.

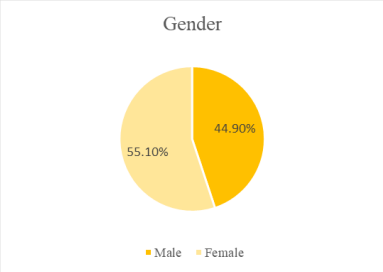
It seems obvious that the type of airline (Flag or low cost) used by the respondent, gender and education are nominal scale, in each answer a word was replaced for a number (Sarstedt and Mooi, 2014).

When it comes to age, it was treated as ordinal scale since when increasing in the number that was substituted by the answer means an older person (Sarstedt and Mooi, 2014). A ratio scale was used for the question if there is any other information that the respondent would like to share, in each 0 means that he has nothing to add and 1 means yes (Sarstedt and Mooi, 2014).

Likert-scale, Likert-type scales answers that varied from 1-Strongly Agree to 5-Strongly Disagree, from 1-Not at all to 5-Very much and from 1-Negative to 5-Positive depending on the variable scale, were treated as interval (Harpe, 2015; Sarstedt and Mooi, 2014).

6.2. Profile of the Sample

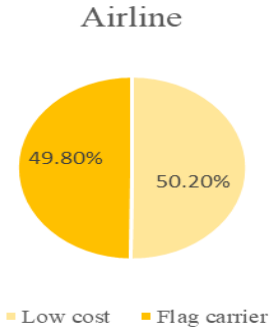
The sample is constituted by 225 valid answers after an exclusion of 8 incomplete answers constituted by 101 males and 124 females that is translated in 44.9% and 55.1% of males and females (graph 1).



GRAPH 1: DISTRIBUTION OF THE GENDER OF THE RESPONDENTS

Source: Own elaboration based on SPSS outputs

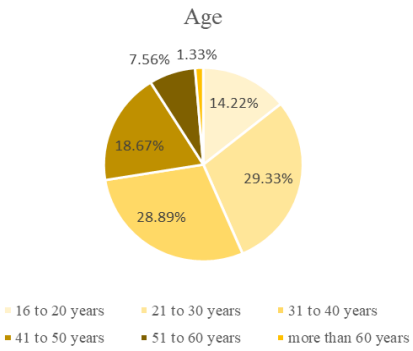
All the respondents flight at least once in the past 3 years, in the first question the respondents were asked to mention the airline that they have most frequently travelled in the past 3 years. According to the answer to that question, the airlines mentioned were split in low cost and flag carrier. The information about it was found on the websites of the airline or other information found about the airline respondents mentioned. The users of low cost carrier constituted about 50.2% of the sample meanwhile flag carrier users were 49.8% which shows an almost equally distributed sample (graph 2).



GRAPH 2: DISTRIBUTION OF THE TYPE OF AIRLINE USED BY RESPONDENTS

Source: Own elaboration based on SPSS outputs

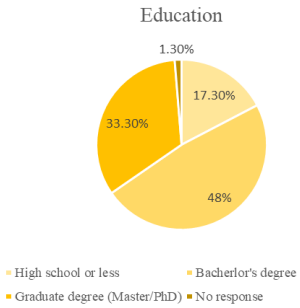
In addition, respondents were also asked about their ages accordingly with the following ranges: 16-20 years, 21-30 years, 31-40 years, 41-50 years, 51-60 years and more than 60 years. From the following graphs based on results, the majority of the respondents are from the range 21 to 30 and 31 to 40 years (graph 3).



GRAPH 3: DISTRIBUTION OF THE AGE OF THE RESPONDENTS

Source: Own elaboration based on SPSS outputs

Moreover, when it comes to the education level, there is a predominance of high educated people with the bachelor's degree representing 48.8% and graduate degree with 33.3% of the sample (graph 4).



GRAPH 4: DISTRIBUTION OF EDUCATION LEVEL OF THE RESPONDENTS

Source: Own elaboration based on SPSS outputs

In terms of nationalities of the sample, there is a predominance of Portuguese respondents that represent 52.4% of the sample, followed by Dutch with 10.7%, German and American (graph 5). This graph intends to emphases the most predominant respondents' nationalities on the sample.

GRAPH 5: DISTRIBUTION OF THE MOST PREDOMINANT NATIONALITIES OF THE RESPONDENTS

Source: Own elaboration based on SPSS outputs

6.3. Descriptive Statistics

In this section for every variable and its dimension is presented the corresponding descriptive statistics that represent a measure of centrality- mean and a measure of dispersion - standard deviation. Since all data was on likert-scale and then analyzed as interval scale, it is possible to compute these both measures.

Moreover, it is also presented a measure of reliability, the cronbach's alpha of each dimension regarding each construct.

An analysis of the dimensionality of each construct was also realized to confirm that the number of dimensions proposed on the original scales are the same found in this sample.

All the assumptions behind the analysis were confirmed to guarantee that it is possible to proceed with it.

The results were retrieved from the SPSS software and correspond to the sample gathered.

The next sections are divided as following – a small description of each analysis, an overview of the data in geral (regarding all dimensions of each construct) and a more detailed analysis regarding each dimension separately.

Note that, the items with an R are reversed coded and for interpretation it is important to highlight this feature.

Reliability

Alpha coefficient was used to measure the reliability of the measurement scales regarding the sample gathered. This coefficient is used to measure the consistency of each dimension and for that it is not advised to calculated for the overall construct (Sarstedt et Mooi, 2014). For instances, in the in-flight construct, for the overall in-flight namely the AIN variable was not calculated. Furthermore, as the calculation depends upon on the number of items of each construct in this paper only were consider for calculations dimensions with more than 3 items otherwise the coefficient could be low and it's a consequence of the lower number of items.

This coefficient can vary from 0 to 1, in which, 0 represents no consistency at all regarding the scale and 1 a perfect consistency of it. The value of 0,60 it's defend to be the lower limit of acceptance of the scale's consistency.

Dimensionality Analysis

Principal component analysis method was used to confirm that the number of the dimensions proposed in the original articles are present at this sample.

6.3.1. Atmospherics in-flight characteristics

General overview

In the questionnaire elaborated 23 questions correspond to the analysis of the in-flight conditions.

From the following table and regarding all first-order constructs of in-flight conditions, it is possible to highlight that **AC3: There is enough staff in this flight** is the item with higher mean of 4,14 (that translating for the scale is "Agree"). When it comes to the item with lower mean, it is possible to highlight that **AF2: There is no in-flight food available in this flight** has a mean of 2,01 corresponding to "Disagree".

In the case of the standard deviation, the item with higher value is **AF2: There is no in-flight food available** in this flight with 1,71 meaning that there is a huge variation in the answers. In the opposite side, the answers that showed a lower variation are related with odour namely **AO2: The odour during this flight is acceptable** and **AO3: The odour on this flight is fine** with 0,69.

Note: Regardless the type of flight low cost or flag, the highest mean of this item shows that passengers are satisfied with the number of staff in the flight. When it comes to the item with the lower mean, there is no in-flight food available in this flight, although the question is in negative it can be seen as a positive aspect of the flights since it signifies that passengers have available food in the flights they travelled.

The last variable, in-flight, AIN represents a new construct that aggregates all the values from the previous items that has a mean of 3,55 that in the scale represents that in the majority of the answers in this sample, the individuals were between neutral and agree with the affirmation. In the case of the standard deviation, the value of 0,49 represents a lower variation of the answers around the mean value.

The measure of reliability, cronbach's alpha is not possible to calculate since it should be calculated for each dimension separately and not for the overall construct (Sarstedt and Mooi, 2014).

Dimensions overview

- **Air Quality**

In Air Quality, the dimension with higher mean and lower standard deviation is **AAQ1: The air quality in this plane is appropriate** with 4,03 and 0,73 respectively meaning that is the sentence with higher consensus on the answers given by respondents (low std. deviation) and that consensus is positive (since 4 on the scale means "Agree"). The majority of the respondents regardless the type of airline used (flag vs low cost) agreed that the air quality is appropriate.

The Cronbach alpha is 0,67 meaning that this scale has an acceptable degree of reliability (Cronbach alpha is higher than 0,60) (Sarsdet and Mooi, 2014).

First-Order construct	Item code	Item	Mean	Std. Deviation
Air Quality	AAQ1	**The air quality in this plane is appropriate**	**4.03**	**0.73**
	AAQ2	It is easier to breathe in this plane compared to other planes	3.28	0.79
	AAQ3	The air in this plane is dust-free	3.76	0.75
Cronbach's Alpha		0.672		

TABLE 2 : DESCRIPTIVE STATISTICS FOR AIR QUALITY

Source: Own elaboration based on SPSS output (adapted from : Loureiro and Fialho, 2016)

- **Temperature**

Regarding the temperature of the plane, the item with higher mean is A**T2: The level of moisture/humidity in this plane is fine** with 3,78 and a standard deviation of 0,75. However, all the other items that compose the dimension have similar means as it is possible to see above in table 3. All of them, as in air quality represent answers between "Neutral" (3 in the likert-scale) and "Agree" (4 in the Likert-scale).

The Cronbach alpha is 0,83 representing a scale with high degree of reliability (the value is higher that the commonly recommended of 0,70).

First-Order construct	Item code	Item	Mean	Std. Deviation
Temperature	AT1	The temperature during the flight is comfortable	3.70	1.05
	AT2	**The level of moisture/humidity in this plane is fine**	**3.78**	**0.75**
	AT3	It is not too cold/hot in this plane	3.64	1.03
	AT4	It is not too dry in this plane	3.68	0.87
Cronbach's Alpha		0.829		

TABLE 3: DESCRIPTIVE STATISTICS FOR TEMPERATURE

Source: Own elaboration based on SPSS output (Adapted from Loureiro and Fialho, 2016)

- **Food**

In the case of food, the item **AF1: In this flight there is only drinks and snacks offered** has a higher mean in comparison with the other item, of 2,79 respectively, and a standard deviation of 1,42. This value means that the majority of passengers disagree that there is drinks and snack offered. Moreover, with a standard deviation of 1,42 and since the scale is from 1 to 5, it shows there is a huge variation in the answers given.

In this case, it is not suitable to calculate Cronbach alpha since only two item compose this dimension.

First-Order construct	Item code	Item	Mean	Std. Deviation
Food	**AF1**	**In this flight there is only drinks and snacks offered**	**2.79**	**1.42**
	AF2	There is no in-flight food available in this flight	2.01	1.71
Cronbach's Alpha		Low number of items		

TABLE 4: DESCRIPTIVE STATISTICS FOR FOOD

Source: Own elaboration based on SPSS output (Adapted from Loureiro and Fialho, 2016)

- **Layout**

When it comes to the layout of the plane, the item **AL3: The seating layout in this plane is comfortably arranged** registered the highest mean of the construct of 3,34 with a standard deviation of 1,17.

In terms of reliability, with a value of 0,62 it exhibits an acceptable internal degree of consistency for our scale since values of 0,60 are acceptable when the study is exploratory (Sarstedt and Mooi, 2014).

First-Order construct	Item code	Item	Mean	Std. Deviation
Layout	AL1	This flight is a single passenger class	3.14	1.38
	AL2	The seat and tray for eating and reading are comfortable	3.35	1.20
	AL3	**The seating layout in this plane is comfortable arranged**	**3.34**	**1.17**
	AL4	There is no class differentiation in this flight	2.69	1.32
	AL5	Overall, the layout in this plane made it easy for me to move around	3.34	1.17
Cronbach's Alpha		0.617		

TABLE 5: DESCRIPTIVE STATISTICS FOR LAYOUT

Source: Own elaboration based on SPSS output (Adapted from Loureiro and Fialho, 2016)

- **Crew**

Analysing the answers to the parameters of the crew, it is possible to conclude that **AC3: There is enough staff in this flight** is the answer with the higher mean of 4.14 and the lower standard deviation 0.83. This means that passengers are satisfy with the number of staff existent in the flight and there is a higher degree of consensus regarding it (low standard deviation in comparison with the others aspects of the crew).

In terms of internal consistency measured by Cronbach alpha, the scale shows a high degree of reliability of 0.90 (beyond the low limit usually suggested of 0.70) (Sarstedt and Mooi, 2014).

First-Order construct	Item code	Item	Mean	Std. Deviation
Crew	AC1	The staff inside the plane is knowledgeable and helpful in this flight	4.04	1.00
	AC2	The staff inside the plane is courteous and professional in this flight	4.05	1.00
	AC3	**There is enough staff in this flight**	**4.14**	**0.83**
	AC4	The staff inside the plane demonstrated interest and enthusiasm in this flight	3.79	1.06
Cronbach's Alpha		0.900		

TABLE 6: DESCRIPTIVE STATISTICS FOR CREW

Source: Own elaboration based on SPSS output (Adpated from Loureiro and Fialho, 2016)

- **Odour**

Regarding odour inside the flight, the answer that registered higher mean and the lower standard deviation is **AO2: The odour during this flight is acceptable** with values of 3.95 and 0.69 respectively. In parallel with this answer, also **AO3: The odour on this flight is fine** also registered 0.69 of std.deviation. This value of mean signifies that the passengers agree with that affirmation since the scale was from 1 to 5 (from strongly disagree to strongly agree) and 4 means "Agree".

With Cronbach's alpha of 0.82, there is a high degree of internal consistency of the scale as mentioned before the value is superior to the lower limit commonly discussed of 0.70 (Sarstedt and Mooi, 2014).

First-Order construct	Item code	Item	Mean	Std. Deviation
Odour	AO1	The flight odour is not strange/unfamiliar	3.75	0.82
	AO2	**The odour during this flight is acceptable**	**3.95**	**0.69**
	AO3	**The odour on this flight is fine**	3.91	**0.69**
Cronbach's Alpha		0.823		

TABLE 7: DESCRIPTIVE STATISTICS FOR ODOUR

Source: Own elaboration based on SPSS output (Adapted from Loureiro and Fialho, 2016)

- **Noise**

When it comes to the noise inside the plane, the sentence with higher mean is **AN1: The noise level of this plane is acceptable** with a mean of 3.69 and standard deviation of 0.92. However, the difference between the mean of both items is not high (AN2 has a mean of 3.64).

Since only two items compose this dimension, it is not possible to calculate cronbach's alpha.

First-Order construct	Item code	Item	Mean	Std. Deviation
Noise	**AN1**	**The noise level of this plane is acceptable**	**3.69**	**0.92**
	AN2	The aircraft noise during this flight is not too loud/bothersome	3.64	0.64
Cronbach's Alpha		Low number of items		

TABLE 8: DESCRIPTIVE STATISTICS FOR NOISE

Source: Own elaboration based on SPSS output (Adapted from Loureiro and Fialho, 2016)

First-Order construct	Item code	Item	Mean	Std. Deviation
Overall in-flight	**AINO**	-	**3.55**	**0.49**

TABLE 9: DESCRIPTIVE STATISTICS FOR OVERALL ATMOSPHERICS IN-FLIGHT CHARACTERISTICS

Source: Own elaboration based on SPSS output

6.3.2. Customer-to-customer interaction

General overview

In the questionnaire, 6 questions composed the construct of consumer-to-consumer exchange. Analysing all items that composed consumer-to-consumer exchange, **C2CI2: I have little attachment to other passengers in that flight** is the item with the highest mean with 2.55. When translating this value to the likert scale, approximately for 3 it means "neutral" which signifies that consumers do not have a great attachment to other passengers nor little attachments.

Regarding the item with the lowest mean, it can be seen that **C2CI1: I have many new valuable contacts in the flight** and **C2CI3: I have valuable formal/informal partnerships with some of the passengers I met at that flight** with 2.12. At same, when translating 2 for the likert-scale, it means disagree for that consumers consider that do not gain from the flight new valuable contacts and do not form partnerships.

When it comes to the standard deviation, the item that exhibits the highest value is **C2CI2: I have little attachment to other passengers in that flight** with 1.19 showing higher dispersion of the answers around the mean. In the opposite side, **C2CI5: More than the number of contacts I made at the flight, the most important value of networking is provided through one or two critical contacts** shows the lowest standard deviation of this construct with 0.99.

The last variable, overall consumer-to-consumer exchange, as explained before collects all values from the items that compose this construct with a mean of 2.29 and a standard deviation of 0.79.

In terms of reliability, Cronbach's alpha exhibits a high degree of internal consistency since its value of 0.82 is higher that the commonly accept of 0.70 (Sarstedt and Mooi, 2014).

First-Order construct	Item code	Item	Mean	Std. Deviation
Customer-to-customer interaction	**C2CI1**	**I have many new valuable contacts in the flight**	**2.12**	**3.94**
	C2CI2	**I have little attachment to other passengers in that flight**	**2.55**	1.19
	C2CI3	**I have valuable formal/informal partnerships with some of the passengers I met at the flight**	**2.12**	1.01
	C2CI4	I continue to exchange valuable information, aks/answer questions, etc with other flight passengers that I met at the flight	2.40	1.07
	C2CI5	More than the number of contacts I made at the flight, the most valuable value of networking is provided through one or two critical contacts	2.17	0.99
	C2CI6	Overall, the value I received and expect to receive from networking is alone worth the costs of the flight	2.15	1.01
Cronbach's Alpha	0.820			

TABLE 10: DESCRIPTIVE STATISTICS CUSTOMER-TO-CUSTOMER INTERACTION

Source: Own elaboration based on SPSS output (Adapted from Gruen *et al.*, 2007)

First-Order construct	Item code	Item	Mean	Std. Deviation
Overall customer-to-customer interaction	**OC2CI**	**-**	**2.29**	**0.76**

TABLE 11: DESCRIPTIVE STATISTICS FOR OVERALL CUSTOMER-TO-CUSTOMER INTERACTION

Source: Own elaboration based on SPSS output

6.3.3. Brand Experience

General overview

In the questionnaire, 12 questions correspond to the analysis of brand experience. From the table and analysing all items that composed brand experience, **BES2: This airline makes a strong impression on my visual sense or other senses** is the item with the highest mean of 3.32 (corresponding to sensory dimension). In the opposite side, the item with the lowest mean

corresponds to **BEB1: I engage in physical actions and behaviours when I use this airline** with a mean of 2.64 (intellectual dimension).

When it comes to the standard deviation, the item with higher value is **BEA3: This airline brand is an emotional brand** with 1.1 representing the item that has higher dispersion of answers by respondents (corresponding to the affective dimension). On the other side, the item with lower standard deviation and, consequently, with higher consensus in the answers given is **BEI2: I engage a lot of thinking when I encounter this airline** with 0.92 (corresponding to the intellectual dimension).

The last variable, overall brand experience, as in the previous construct collects all the values from the previous items and has a mean of 2.95, approximately, 3 which in the scale is the answer "neutral" with a standard deviation of 0.70.

The measure of reliability, cronbach's alpha is not possible to calculate since it should be calculated for each dimension separately and not for the overall construct (Sarstedt and Mooi, 2014).

Dimensions overview

- **Sensory**

The item with the higher mean is **BES2: This airline makes a strong impression on my visual sense or other senses** with 3.32 although other items have very close means. This means that, in general, the respondents answered quite similar answers to the items of this dimension.

Analysing the standard deviation, **BES3: I find the airline interesting in a sensory way** has 1.0, the lowest value. However, as it happened with the values of the means, the values of the standard deviation are also very close.

Cronbach's Alpha for this dimension is of 0.78 which shows a high level of internal consistency for this scale (the value is superior to the minimum usually acceptable of 0.70 (Sarstedt and Mooi, 2014)).

First-Order construct	Item code	Item	Mean	Std. Deviation
Sensory	BES1	This airline does not appeal to my senses	3.30	1.04
	BES2	**This airline makes a strong impression on my visual sense or other senses**	**3.32**	1.02
	BES3	**I find the airline interesting in a sensory way**	3.24	**1.0**
Cronbach's Alpha		0.775		

TABLE 12: DESCRIPTIVE STATISTICS FOR SENSORY

Source: Own elaboration based on SPSS output (Adapted from: Brakus *et al.*, 2009)

∝ **Affective**

When it comes to affective dimension, the item with higher mean and lower standard deviation is **BEA2: This airline induces feelings and sentiments** with 3.03 and 1.08 respectively.

Cronbach's alpha is 0.79 which exhibits a high degree of reliability since it is higher that the limit commonly accepted of 0.70 (Sarstedt and Mooi, 2014).

First-Order construct	Item code	Item	Mean	Std. Deviation
Affective	BEA1	I do not have a strong emotions for this airline	2.92	1.06
	BEA2	**This airline induces feelings and sentiments**	**3.03**	1.08
	BEA3	This airline brand is an emotional brand	2.88	1.1
Cronbach's Alpha		0.791		

TABLE 13: DESCRIPTIVE STATISTICS FOR AFFECTIVE

Source: Own elaboration based on SPSS output (Adapted from Brakus *et al.*, 2009)

∝ **Intellectual**

In the intellectual dimension, **BE1: This airline does not make me think** is the item with highest mean with 2.99. The item, **BEI2: I engage a lot of thinking when I encounter this airline** is the one that registered the lowest standard deviation with 0.92.

The reliability coefficient alpha is very low of 0.563 although it is close of the commonly accepted 0.6 and for that it could also be considered.

First-Order construct	Item code	Item	Mean	Std. Deviation
Intellectual	**BEI1**	**This airline does not make me think**	**2.99**	1.00
	BEI2	**I engage a lot of thinking when I encounter this airline**	2.65	**0.92**
	BEI3	This airline brand stimulates my curiosity and problem solving	2.68	0.98
Cronbach's Alpha		0.563		

TABLE 14: DESCRIPTIVE STATISTICS FOR INTELLECTUAL

Source: Own elaboration based on SPSS output (Adapted from: Brakus *et al.*, 2009)

- ∝ **Behavioural**

In behavioral dimension, the item with higher mean and lower standard deviation is **BEB3: This airline is not action oriented** with 3.08 and 0.98 respectively.

Regarding the coefficient of reliability, alpha, registered a value of 0.59 which is quite low although it is very close of the minimum acceptable of 0.60.

First-Order construct	Item code	Item	Mean	Std. Deviation
Behavioural	**BEB1**	**I engage in physical actions and behaviours when I use this airline**	**2.64**	1.05
	BEB2	This airline results in bodily experiences	2.69	1.04
	BEB3	**This airline is not action oriented**	**3.08**	**0.98**
Cronbach's Alpha		0.594		

TABLE 15: DESCRIPTIVE STATISTICS FOR BEHAVIOURAL

Source: Own elaboration based on SPSS output (Adapted from : Brakus et al., 2009)

First-Order construct	Item code	Item	Mean	Std. Deviation
Overall brand experience	**OBE**	-	**2.95**	**0.70**

TABLE 16: DESCRIPTIVE STATISTICS FOR OVERALL BRAND EXPERIENCE

Source: Own elaboration based on SPSS output

6.3.4. Brand Love

In the survey, 13 questions correspond to the analysis of the construct brand Love. The original scale of brand Love was composed by 24 items, which was reduced by the authors of the original scale to a 13-item or 6-item scale (Bagozzi *et al.*, 2017), depending on the research conducted. As a result of this, in this thesis, the 13-item scale was selected since it is not a very

extensive neither a very short scale and, therefore, results in an accurate analysis of this construct.

The item **BL11: Do you believe that you will be travelling with this airline for a long time?** is the one that registered the highest mean of 3.62. This means that the passengers do agree on continuing using the airline that they have previously used (since the mean when translating to the scale means approximately “yes”).

On the opposite side, **BL5: Are you willing to spend a lot of time improving and fine-tuning a product of this airline after you buy it?** is the item with the lowest mean and the lowest standard deviation of 2.22 and 0.98, respectively, meaning that the consumers are quite sensitive to the price of the products/services of the airlines (since they are not willing to invest a lot in improvements) and all there is lower dispersion of the answers.

The last variable, overall brand love, as in the previous constructs, gathers all value of brand love items and has a mean of 2.80, approximately 3 which in the scale of the brand love means moderately. In terms of standard deviation, it has a value of 0.82. The reliability coefficient is the same as showed in the table 16.

First-Order construct	Item code	Item	Mean	Std. Deviation
Brand Love	BL1	Flying with this airline says something "true" and "deep" about whom you are as a person	2.50	1.15
	BL2	Is this airline able to make you look like you what to look?	2.73	1.13
	BL3	Is this airline able to do something that makes your life more	2.65	1.09
	BL4	Do you find yourself thinking about that airline?	2.52	1.05
	BL5	**Are you willing to spend a lot of time improving and fine-tuning a product of this airline after you buy it?**	**2.22**	**0.98**
	BL6	Do you feel yourself desiring to flight with that airline?	3.03	1.15
	BL7	Have you interacted with that airline in the past?	3.44	1.14
	BL8	Do you feel that there is a natural fit between you and that airline?	2.74	1.11
	BL9	You feel emotionally connected to this airline	2.46	1.15
	BL10	Do you feel that this airline is fun?	2.90	1.04
	BL11	**Do you believe that you will be travelling with this airline for a long time?**	**3.62**	1.03
	BL12	Suppose that airline is no longer available for travelling, to what extent would you feel ... Anxiety	2.55	1.14
	BL13	Please express your overall feelings and evaluation towards that airline	2.50	1.15
Cronbach's Alpha		0.932		

TABLE 17: DESCRIPTIVE STATISTICS FOR BRAND LOVE

Source: Own elaboration based on SPSS output (Adapted from Bagozzi et al., 2017)

First-Order construct	Item code	Item	Mean	Std. Deviation
Overall brand Love	**OBL**	-	**2.80**	**0.82**

TABLE 18: DESCRIPTIVE STATISTICS FOR OVERALL BRAND LOVE

Source: Own elaboration based on SPSS output

6.3.5. Co-creation

General overview

In the questionnaire, 25 questions correspond to the analysis of the co-creation of value. From the table and regarding all items of the co-creation, it is possible to see that **CCC5: We collaborate on the project** is the item with the highest mean of 3.62 (which corresponds to the dimension of collaboration). When translating this value to the correspondent on the likert-scale, approximately 4 that means agree it is possible to realise that passengers when collaborating with the airplane company feel that he and the company work on something together.

On the other side, **CCM4: It is valuable for me** is the item with the lowest mean of 2.22 which corresponds to the dimension meaningfulness. In this case, translating to the correspondent likert-scale, we realise that passengers disagree with the value of the "task"/ collaboration they did with the airline company. It means that although they work together to achieve mutual benefits, they do not feel it is valuable for them (like personally it does not have any specific value).

In the case of the standard deviation, the item with the highest value is **CCM5: My effort is worthwhile** with a value of 1.15 which shows a variation of the respondent's answers around the mean. Per opposition, the item with the lowest standard deviation is **CCM4: It is valuable for me** with a value of 0.98 showing that there is lower dispersion of the answers around the mean. Since the mean of this item is the lower and the dispersion around the mean is also low, it is possible to see that most of the passengers do agree that the tasks done in partnership with the airline are not very valuable.

The last variable, as in the previous examples are the sum of all items and exhibits a mean of 2.99, approximately 3 which mean that the passengers are neutral (in the likert-scale) with the majority of the statements and a standard deviation of 0.75.

The measure of reliability, as explained in the previous dimensions was calculated for each dimension separately.

Dimensions overview

- **Meaningfulness**

Regarding the meaningfulness dimension, it can be highlighted that the item **CCM5: My effort is worthwhile** is the item with the highest mean with a value of 3.03 contrasting with the item with the lowest mean that has a value of 2.22. Transforming that value (3.03) to the likert-scale, it signifies neutral meaning that passengers do not consider their effort worthwhile nor worthless.

For this dimension, the lowest standard deviation has the item **CCM4: It is valuable for me** with a value of 0.98 exhibiting the lowest deviation of the answers around the mean and contrasting with the highest standard deviation of 1.15.

The reliability coefficient alpha, exhibits a high degree of internal consistency with a value of 0.86 since it is above the commonly suggested value of 0.70 (Sarsdet and Mooi, 2014).

First-Order construct	Item code	Item	Mean	Std. Deviation
Meaningfulness	CCM1	It is meaningful	2.73	1.13
	CCM2	This is important to me	2.65	1.09
	CCM3	The time I spent on it is worthwhile	2.52	1.05
	CCM4	**It is valuable for me**	2.22	**0.98**
	CCM5	**My effort is worthwhile**	**3.03**	**1.15**
Cronbach's Alpha		0.862		

TABLE 19: DESCRIPTIVE STATISTICS FOR MEANINGFULNESS

Source: Own elaboration based on SPSS output (Adapted from: Busser and Shulga, 2018)

- **Collaboration**

When it comes to collaboration, the item **CCC5: We collaborate on the project** has the highest mean of 3.62 which in the likert-scale means "agree" showing that passengers when cooperating with the airline feel that they and the company invest both their resources for a project. This item also displays the lowest standard deviation with a value of 1.03 in parallel with the item **CCC2: We create it together**.

This scale exhibits a high level of internal consistency since the value of Cronbach alpha is 0.80, higher than the lower limit commonly accepted of 0.70 (Sarstedt and Mooi, 2014).

In this dimension, it is interesting to see that passengers do not feel that they are working together with the airline (since it is the item with the lowest mean – 2.46) although they feel that they doing activities to solve a problem (collaborating).

However, this results shows that there is not a strong union between the passengers and the airline since they are neutral in statements as CC1: We are a team, CC2: We create it together and CC4: We cooperate with each other. Furthermore, the disagreement with the statement that they are working together can be a mirror of kind of individualism felt by consumers against the airline. Nevertheless, they feel that they and the company need to invest resources synchronized to a specific project. There is a sense that it is necessary to invest resources in order to solve a problem but they do not want to "melt" and work in a complete partnership with the airline.

First-Order construct	Item code	Item	Mean	Std. Deviation
Collaboration	CCC1	We are a team	3.44	1.14
	CCC2	**We create it together**	2.74	**1.10**
	CCC3	We are working together	2.46	1.15
	CCC4	We cooperate with each other	2.90	1.04
	CCC5	**We collaborate on the project**	**3.62**	**1.03**
Cronbach's Alpha		0.799		

TABLE 20: DESCRIPTIVE STATISTICS FOR COLLABORATION

Source: Own elaboration based on SPSS output (Adapted from: Busser and Shulga, 2018)

∝ Contribution

In this dimension, the item that performed well, with the highest mean and the lowest standard deviation is **CCCon3: I contribute my experience to this** with 3.32 and 1.04, respectively. With a very close mean, the item **CCCon2: I contribute my skills** to this with 3.22. In this case, passengers throughout their path they gain experience which is usually translated in a skill gained meaning that is very difficult to completely separate both things that is the possible reason why both are very close. In parallel with **CCCon2: I contribute my skills to this** has also the lowest standard deviation of 1.04.

The reliability coefficient exhibits a high degree of internal consistency with a value of 0.88 superior to the commonly suggested 0.70 (Sarsdet and Mooi, 2014).

First-Order construct	Item code	Item	Mean	Std. Deviation
Contribution	CCCon1	I share my knowledge	2.55	1.14
	CCCon2	**I contribute my skills to this**	3.22	**1.04**
	CCCon3	**I contribute my experience to this**	**3.32**	**1.04**
	CCCon4	I invest my resources	3.12	1.10
	CCCon5	I make a personal investment in this	2.97	1.08
Cronbach's Alpha		0.876		

TABLE 21: DESCRIPTIVE STATISTICS FOR CONTRIBUTION

Source: Own elaboration based on SPSS output (Adapted from: Busser and Shulga, 2018)

- **Recognition**

The item of this dimension that demonstrated the highest mean is **CCR5: We achieve mutual benefits** with a value of 3.25. In terms of the standard deviation, the item that performed well is **CCR3: Others recognized the outcome** with a value of 1.02 which exhibits a lower dispersion of the answers around the mean.

In terms of reliability, this scale displays a high degree of internal consistency of 0.945 higher than the suggested limit of 0.70 (Sarsdet and Mooi, 2014).

First-Order construct	Item code	Item	Mean	Std. Deviation
Recognition	CCR1	I receive credit for this	2.89	1.10
	CCR2	Our results are recognized	3.03	1.05
	CCR3	**Others recognized the outcome**	3.00	**1.02**
	CCR4	Others recognized me for this	2.89	1.03
	CCR5	**We achieve mutual benefits**	**3.25**	1.07
Cronbach's Alpha		0.945		

TABLE 22: DESCRIPTIVE STATISTICS FOR RECOGNITION

Source: Own elaboration based on SPSS output (Adapted from Busser and Shulga, 2018)

- **Affective response**

In terms of affective response, **CCA4: This is interesting** is the item that performed well with the highest mean of 3.32 followed by **CCA3: This is enjoyable** with 3.27. However, all other items have close means. When it comes to the analysis of the standard deviation, **CCA4: This is interesting** is also the item that performed well with the lowest value of 1.02.

The scale demonstrates a high level of internal consistency since the Cronbach alpha is 0.971 higher that the frequently suggested 0.70 (Sarsdet and Mooi, 2014).

First-Order construct	Item code	Item	Mean	Std. Deviation
Affective response	CCA1	This is fun	3.21	1.04
	CCA2	This is entertaining	3.16	1.05
	CCA3	This is enjoyable	3.27	1.03
	CCA4	**This is interesting**	**3.32**	**1.02**
	CCA5	It is exciting	3.17	1.03
Cronbach's Alpha		0.971		

TABLE 23: DESCRIPTIVE STATISTICS FOR AFFECTIVE RESPONSE

Source: Own elaboration based on SPSS output (Busser and Shulga, 2018)

First-Order construct	Item code	Item	Mean	Std. Deviation
Overall Co-creation of value	OCC	-	2.99	0.75

TABLE 24: DESCRIPTIVE STATISTICS FOR OVERALL CO-CREATION OF VALUE

Source: Own elaboration based on SPSS output

6.3.6. Consumer engagement

General overview

In the questionnaire, 16 questions correspond to the analysis of consumer engagement. From the following table and analysing all items of consumer engagement, **CECL2: I will continue buying products/services of that airline in the near future** is the item with higher mean of 3.79 (that belongs to the consumers' lifetime value dimension).

When translating this mean to the likert-scale, a value of 3.79 corresponds to "Agree" (approximately). The item of the dimension with the lowest mean is **CECI4: I am part of this airline and mention it in my conversations** with a mean of 2.43 signifying that respondents disagree with the affirmation (belonging to influence value).

Analysing the standard deviation, the item with the highest value is **CECK1: I provide feedback about my experiences with the airline to the firm** (corresponding to consumer

knowledge value) with 1.28 which means that has a higher dispersion of answers around the mean. On the other side, **CECL3: My purchases with that airline make me content** (corresponding to consumer lifetime value) is the item with the lowest standard deviation of 0.97.

The last variable, overall consumer engagement, exhibits a mean of 3.02 which in the likert-scale correspondents to a "neutral" with a standard deviation around it 0.70.

As in the other variables, cronbach's alpha is not calculate as a result of being calculated separately for each dimension.

Dimensions overview

- ∝ **Lifetime value**

Analysing this dimension of consumer engagement, the item **CECL2: I will continue buying products/services of that airline in the near future** is the item with higher mean of 3.79. When translating this mean to the likert-scale, it corresponds to "agree" signifying that respondents show an interest in continue purchasing that airlines' products/services.

The item, **CECL3: My purchases with that airline make me content** is the item with lower standard deviation with 0.97 of the answers around the mean.

The reliability coefficient, alpha, exhibits a high degree of internal consistency with a value of 0.84 faraway higher that the lower limit commonly accepted of 0.60.

First-Order construct	Item code	Item	Mean	Std. Deviation
Lifetime value	CECL1	I do not get my money's worth it when I purchase things from that airline	3.44	1.21
	CECL2	**I will continue buying the products/services of that airline in the near future**	**3.79**	1.11
	CECL3	**My purchases with that airline make me content**	3.60	**0.97**
	CECL4	Owning products/services of this airline makes me happy	3.29	1.01
Cronbach's Alpha		0.840		

TABLE 25: DESCRIPTIVE STATISTICS FOR LIFETIME VALUE

Source: Own elaboration based on SPSS output (Adapted from: Kumar and Pansari, 2016)

∝ Referral value

When it comes to referral value, **CECR2: In addition to the value derived from the product, the monetary referral incentives also encourage me to refer this airline to my friends and relatives** is the item with the highest mean of 3.0. Despite all other items have very close means.

The item with the lowest standard deviation is **CECR4: Given that I use this airline, I refer my friends and relatives to this brand because of the monetary referral incentives** with a value of 1.06 exhibiting a lower deviation around the mean.

In terms of internal consistency measured by the reliability coefficient alpha, there is a high degree of it since the value is of 0.931, higher that the commonly limit accepted of 0.60 (Sarstedt and Mooi, 2014).

First-Order construct	Item code	Item	Mean	Std. Deviation
Referral value	CECR1	I promote this airline because of the monetary referral benefits provided by the brand	2.91	1.15
	CECR2	**In addition to the value derived from the product, the monetary referral incentives also encourage me to refer this airline to my friends and relatives**	**3.0**	1.10
	CECR3	I enjoy referring this airline, I refer to my friends and relatives because of the monetary referral incentives	2.93	1.10
	CECR4	Given that I use this airline, I refer my friends and relatives to this brand because of the monetary referral incentives	2.93	1.06
Cronbach's Alpha		0.931		

TABLE 26: DESCRIPTIVE STATISTICS FOR REFERRAL VALUE

Source: Own elaboration based on SPSS output (Adapted from Kumar and Pansari, 2016)

∝ Influence value

When it comes to consumer influence value, the item **CECI3: I discuss the benefits that I get from this airline with others** is the one with higher mean of 3.24 and lower standard deviation of 1.12. The item that has also a high mean is **CECI2: I love talking about my brand experience** of 2.96. The combination of this two items shows that consumers do like to talk

about the experience they have and discuss the benefits with others although they do not properly do it in their media or feel to be part of the airline (since the means of these items are low).

Analysing the standard deviation, the item with the lowest value is also CECI3: **I discuss the benefits that I get from this airline with others** with 1.12.

In terms of reliability, the scale exhibits an acceptable level of internal consistency since the coefficient is 0.685 higher than the lowest limit accepted of 0,600 (Sarsdet and Mooi, 2014).

First-Order construct	Item code	Item	Mean	Std. Deviation
Influence value	CECI1	I do not actively discuss this airline brand on any media	2.50	1.20
	CECI2	I love talking about my brand experience	2.96	1.14
	CECI3	**I discuss the benefits that I get from this airline with others**	**3.24**	**1.12**
	CECI4	I am part of this airline and mention it in my conversations	2.43	1.12
Cronbach's Alpha		0.685		

TABLE 27: DESCRIPTIVE STATISTICS FOR INFLUENCE VALUE

Source: Own elaboration based on SPSS output (Adapted from Kumar and Pansari, 2016)

- **Knowledge value**

When it comes to the consumer knowledge value, the item with the highest mean is **CECK2: I provide suggestions/feedback for improving the performance of the airline** with 2.92. The item **CECK4: I provide suggestions/feedback for developing new products/services for this airline** is the one with lowest standard deviation, with a value of 1.19, exhibiting lower dispersion of the answers regarding the mean.

In terms of internal consistency, the coefficient alpha exhibits a high degree of reliability with a value of 0.93 higher than the commonly suggested of 0.70 (Sarstedt and Mooi, 2014).

First-Order construct	Item code	Item	Mean	Std. Deviation
Knowledge value	CECK1	I provide feedback about my experiences with the airline to the firm	2.85	1.28
	CECK2	**I provide suggestions/feedback for improving the performance of the airline**	**2.92**	1.22
	CECK3	I provide suggestions/feedback about new products/services of that airline	2.79	1.21
	CECK4	**I provide suggestions/feedback for developing new products/services for this airline**	2.78	**1.19**
Cronbach's Alpha	0.926			

TABLE 28: DESCRIPTIVE STATISTICS FOR KNOWLEDGE VALUE

Source: Own elaboration based on SPSS output (Kumar and Pansari, 2016)

First-Order construct	Item code	Item	Mean	Std. Deviation
Overall consumer engagement	OCECK	-	3.02	0.71

TABLE 29: DESCRIPTIVE STATISTICS FOR OVERALL CONSUMER ENGAGEMENT

Source: Own elaboration based on SPSS output (Kumar and Pansari, 2016)

6.4. Dimensionality Analysis

To confirm the dimensions for all variables initially proposed by the articles in which this study was based and since the available statistical tool was SPSS, exploratory factorial analysis was conducted. The main objective with this analysis is to check that the number of dimensions found by the original articles are the same that was found in this study, with this sample. To conduct exploratory factorial analysis, means of KMO and Bartlett's test was used.

To analyse data three components will be taken in account which are -Kaiser-Meyer-Olkin (KMO) or also named measure of sampling adequacy that intents to see whether there are correlations between variables that can be explained by others and also, the bartlett's test of sphericity in which it is tested if the initial variables are not related (in the null hypothesis). A 95% level of significance was taken and for that a=0.05.

6.4.1. Atmospherics in-flight characteristics

- **Air Quality**

The Kaiser-Meyer-Olkin (KMO) is 0.66, exhibits a mediocre adequacy of correlation to compute this analysis and the null hypothesis affirming that initial variables are not related since sig=0.00< 0.05 signifying that there are variables related (in bartlett's test of sphericity, check on table 30). Furthermore, one component was extracted that explains 60.59% of the total variance (resulting in the same variables' number as in the original article) (consult appendix B).

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling		**.660**
Bartlett's Test of Sphericity	Approx. Chi-Square	105.180
	df	3
	Sig.	**.000**

TABLE 30: KMO AND BARTLETT'S TEST OF AIR QUALITY

Source – Own elaboration based on SPSS results

- **Temperature**

The KMO shows a mediocre adequacy of correlation of 0.68 to compute this analysis (see table 31). The bartlett's T test shows that the initial variables are related, the null hypothesis was rejected (sig=0.000<0.05). In addition, one component was extracted that explains 66.82%

of the total variance (which results in the same variables' number as in the original article) (consult appendix B).

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling		**.684**
Bartlett's Test of Sphericity	Approx. Chi-Square	456.157
	df	6
	Sig.	**.000**

TABLE 31: KMO AND BARTLETT'S TEST OF TEMPERATURE

Source – Own elaboration based on SPSS results

- **Food**

The KMO is 0.50 which is the lowest limit to accept the adequacy of correlations between variables (see table 32). The bartlett's test of sphericity shows that the null hypothesis is rejected since sig=0.000<0.05. In addition, it is appropriate to examine factor analysis, in which one component was extracted that accounts for 68.39% of the overall variance (the number of components are the same as in the original article)(consult appendix B).

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling		**.500**
Bartlett's Test of Sphericity	Approx. Chi-Square	33.499
	df	1
	Sig.	**.000**

TABLE 32: KMO AND BARTLETT'S TEST OF FOOD

Source – Own elaboration based on SPSS results

- **Layout**

The KMO is 0.67 (table 33) exhibiting a mediocre level of adequacy of the correlations between variables. Analysing the bartlett's test of sphericity, the null hypothesis is rejected because sig=0.00<0.05. Furthermore, it is possible to go along the principal component analysis in which two components were extracted. The component accounts for 49.5% of the overall variance while the other one accounts for 29.54% of the overall component (table 33).

In opposition to the article in which this study was based that only suggests one component, two components were found in this sample (Loureiro and Fialho, 2016).

The first component is composed by **AL1: This flight is a single passenger class** and **AL4: There is no class differentiation in this flight,** items related with the types of classes in the plane and will be named: classes on the plane (ACP).

The second component is composed by **AL2: The seat and tray for eating and reading are comfortable**, **AL3: The seating layout in this plane in comfortably arranged** and **AL5: Overall, the layout in this plane made it easy for me to move around,** items related with the configuration of the layout in general and designed by that. This sub-set will be named: Overall layout (AOL). It is a result of the analysis of the table 34, which lead to conclude on which items are closely related with each of the extracted components. In this case, the highest value represents the ones that compose that component which are highlighted in table 34.

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling		**.667**
Bartlett's Test of Sphericity	Approx. Chi-Square	518.077
	df	10
	Sig.	**.000**

TABLE 33: KMO AND BARTLETT'S TEST OF LAYOUT

Source – Own elaboration based on SPSS results

Total Variance Explained									
	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
Component	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.476	49.529	49.529	2.476	49.529	49.529	2.475	**49.507**	49.507
2	1.476	29.514	79.043	1.476	29.514	79.043	1.477	**29.536**	79.043
3	.549	10.985	90.028						
4	.349	6.989	97.017						
5	.149	2.983	100.000						

Extraction Method: Principal Component Analysis.

TABLE 34: TOTAL VARIANCE EXPLAINED OF LAYOUT

Source – Own elaboration based on SPSS results

Rotated Component Matrix[a]		
	Component	
	1	2
AL1	-.046	**.850**
AL2	**.920**	-.100
AL3	**.939**	.004
AL4	.036	**.860**
AL5	**.863**	.073

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.[a]

a. Rotation converged in 3 iterations.

TABLE 35: COMPONENT MATRIX FOR LAYOUT

Source – Own elaboration based on SPSS results

∝ Crew

The KMO is 0.79 (table 36) showing a middling level of adequacy of correlations. The bartlett's test of sphericity lead to reject the null hypothesis that the initial variables are not related (sig=0.000< 0.05). For both reasons, principal component analysis can be executed and result in a extraction of one component that explains 76.68% of the total variance. As in the initial article, only one component was extracted ()(consult appendix B).

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling		**.788**
Bartlett's Test of Sphericity	Approx. Chi-Square	657.953
	df	6
	Sig.	**.000**

TABLE 36: KMO AND BARTLETT'S TEST FOR CREW

Source – Own elaboration based on SPSS results

∝ Odour

The KMO is 0.68 (table 37) which in terms of adequacy of the correlations shows a mediocre level however, it is still acceptable and allows to go along the analysis. When it comes to the analysis of the bartlett's test of sphericity, the null hypothesis is rejected since sig=0.00<0.05, which lead to the persecution of the investigation of components that composed this dimension. Only one component was extracted which explains 74.71% of the total variance (as in the initial proposed scale))(consult appendix B).

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling		**.688**
Bartlett's Test of Sphericity	Approx. Chi-Square	276.217
	df	3
	Sig.	**.000**

TABLE 37: KMO AND BARTLETT'S TEST FOR ODOUR

Source – Own elaboration based on SPSS results

∝ Noise

The KMO is 0.500 (table 38) which is the lower level of acceptance of adequacy of correlations. Analysing the Bartlett's test of sphericity, the null hypothesis is rejected (sig=0.00<0.05) which means that there are correlations between variables. For that, the

extraction of the principal component can be executed and one variable was extracted that explains 88.56% of the total variance (as in the initial proposed scale))(consult appendix B).

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling		**.500**
Bartlett's Test of Sphericity	Approx. Chi-Square	208.236
	df	1
	Sig.	**.000**

TABLE 38: KMO AND BARTLETT'S TEST FOR NOISE

Source – Own elaboration based on SPSS results

6.4.2. Customer-to-customer interaction

The KMO is 0.844 (table 39) which means that it is a meritorious level of adequacy of correlations between variables. The bartlett's test of sphericity lead to reject the null hypothesis since sig=0.000<0.05 and, therefore, there is a correlation between the initial variables. Afterwards, principal component analysis can be conducted and in doing so, one component was extracted that accounts for 58.52% for the total of variance. Only one component was extracted as in the original article (consult appendix B).

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling		**.844**
Bartlett's Test of Sphericity	Approx. Chi-Square	631.544
	df	15
	Sig.	**.000**

TABLE 39: KMO AND BARTLETT'S TEST FOR CUSTOMER-TO-CUSTOMER INTERACTION

Source – Own elaboration based on SPSS results

6.4.3. Brand Experience

- ∝ **Sensory**

The KMO is 0.62 (table 40) which is acceptable for proving that correlations between variables can be explained by other variables. In addition, the Bartlett's test of sphericity allow to conclude that the null hypothesis should be rejected (sig=0.00<0.05) and for it, it is possible to go along with the principal component analysis.

One component was extracted that account for the explanation of 69.70% of total variance (as in the original article that this scale was based) (consult appendix B).

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling		**.624**
Bartlett's Test of Sphericity	Approx. Chi-Square	253.620
	df	3
	Sig.	**.000**

TABLE 40: KMO AND BARTLETT'S TEST FOR SENSORY

Source – Own elaboration based on SPSS results

- **Affective**

The KMO is 0.66 (table 41) which is an acceptable level of adequacy of correlations. When analysing bartlett's test of sphericity, it is also possible to conclude that the null hypothesis is rejected (sig=0.00<0.05) and, for that, the variables have correlations. One principal component was extracted that explains 70.66% of the total variance (as in the original article) (consult appendix B).

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling		**.655**
Bartlett's Test of Sphericity	Approx. Chi-Square	238.212
	df	3
	Sig.	**.000**

TABLE 41: KMO AND BARTLETT'S TEST FOR AFFECTIVE

Source – Own elaboration based on SPSS results

- **Intellectual**

The KMO is 0.54 (table 42) which is higher than the lowest limit of acceptance of 0.50. The bartlett's test of sphericity lead to reject the null hypothesis that the initial variables are not correlated (since sig=0.00<0.05) and to go along the principal component analysis. One component was extracted (as in the original article) that accounts for 54.52% of the total variance (consult appendix B).

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling		**.537**
Bartlett's Test of Sphericity	Approx. Chi-Square	88.308
	df	3
	Sig.	**.000**

TABLE 42: KMO AND BARTLETT'S TEST FOR INTELLECTUAL

Source – Own elaboration based on SPSS results

- **Behavioural**

The KMO is 0.50 (table 43) which is the lowest limit of acceptance of adequacy of correlations between variables. The bartlett's T test of sphericity lead to reject the null hypothesis that states that the initial variables are not correlated (since sig=0.00<0.05). Afterwards, principal component analysis can be executed. One component was extracted that accounts to explain 58.46% of the total variance (only one component extracted as in the original article) (consult appendix B).

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling		**.503**
Bartlett's Test of Sphericity	Approx. Chi-Square	172.268
	df	3
	Sig.	**.000**

TABLE 43: KMO AND BARTLETT'S TEST FOR BEHAVIOURAL

Source – Own elaboration based on SPSS results

6.4.4. Brand Love

Since Brand Love scale measurement used in this dissertation is a reduced scale proposed by the authors of the original scale, the dimensionality was not analysed and it was used only one dimension for this variable as proposed in the respective article (Bagozzi *et al.,* 2017).

6.4.5. Co-creation

- **Meaningfulness**

The KMO is 0.85 (table 44) which represents a meritorious degree of adequacy of the correlation between variables. Furthermore, analysing bartlett's T test of sphericity it is possible to see that the null hypothesis is rejected since sig=0.00<0.05. Afterwards, there is a correlation between the initial variables and principal component analysis can be conducted. One factor was extracted that accounts for 64.74% of the total variance.

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling		**.847**
Bartlett's Test of Sphericity	Approx. Chi-Square	510.128
	df	10
	Sig.	**.000**

TABLE 44: KMO AND BARTLETT'S TEST OF MEANINGFULNESS

Source – Own elaboration based on SPSS results

∝ Collaboration

The KMO is 0.79 (table 45) which represents a middling degree of adequacy of the correlation between variables. Bartlett's T test of sphericity allows to conclude that the null hypothesis is rejected since sig=0.000<0.05 and, consequently, there is a correlation between the initial variables. In addition, principal component analysis can be conducted. From principal component analysis, one component was extracted that accounts to explain 56.79% of the total variance (consult appendix B).

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling		**.787**
Bartlett's Test of Sphericity	Approx. Chi-Square	431.213
	df	10
	Sig.	**.000**

TABLE 45: KMO AND BARTLETT'S TEST OF COLLABORATION

Source – Own elaboration based on SPSS results

∝ Contribution

The KMO is 0.81 (table 46) which shows a meritorious degree of adequacy of the correlation between variables. Analysing bartlett's T test of sphericity, it is possible to conclude that the null hypothesis is rejected since sig=0.000<0.05 and, therefore, there is a correlation between the initial variables. As a result of this, principal component analysis can be conducted. When doing so, one component was extracted and account for 69.52% of the total variance (consult appendix B)

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling		**.811**
Bartlett's Test of Sphericity	Approx. Chi-Square	848.541
	df	10
	Sig.	**.000**

TABLE 46: KMO AND BARTLETT'S TEST OF CONTRIBUTION

Source – Own elaboration based on SPSS results

∝ Recognition

The KMO is 0.87 (table 47) which represents a meritorious degree of adequacy of the correlation between variables. Analysing bartlett's test of sphericity, it leads to reject the null hypothesis since sig=0.000<0.05 and, therefore, there are correlations between the initial

variables. For that, it is possible to compute principal component analysis and in doing so, one component was extracted that accounts to explain 82.08% of the total variance (consult appendix B).

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling		**.870**
Bartlett's Test of Sphericity	Approx. Chi-Square	1199.185
	df	10
	Sig.	**.000**

TABLE 47: KMO AND BARTLETT'S TEST OF RECOGNITION

Source – Own elaboration based on SPSS results

∝ **Affective response**

The KMO is 0.90 (table 48) which is a marvellous degree of adequacy of the correlation between variables. When analysing bartlett's T test of sphericity, it is possible to conclude that null hypothesis should be rejected (sig=0.000<0.05). Therefore, there are correlations between the initial variables and it is possible to compute principal component analysis. In doing so, principal component analysis, only one component was extracted that accounts for 89.56% of the total variance (consult appendix B).

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling		**.901**
Bartlett's Test of Sphericity	Approx. Chi-Square	1579.839
	df	10
	Sig.	**.000**

TABLE 48: KMO AND BARTLETT'S TEST OF AFFECTIVE RESPONSE

Source – Own elaboration based on SPSS results

6.4.6. Consumer engagement

∝ **Lifetime value**

The KMO is 0.76 (table 49) which is considered a middling adequacy of the correlations between variables. The bartlett's test of sphericity allows to reject the null hypothesis sig=0.00<0.05 and therefore, there are correlations between variables. Analysing the number of factors extracted, one factor was extracted that accounts to explain 68.72% of the total variance (as in the original article that this scale was retrieved) (consult appendix B).

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling		**.760**
Bartlett's Test of Sphericity	Approx. Chi-Square	428.702
	df	6
	Sig.	**.000**

TABLE 49: KMO AND BARTLETT'S TEST OF LIFETIME VALUE

Source – Own elaboration based on SPSS results

- **Referral value**

The KMO is 0,85 (table 50) which is a meritorious level of adequacy of the correlations between variables. The bartlett's test of sphericity lead to reject the null hypothesis because sig=0.00<0.05 and, consequently, the original variables are correlated. Analysing the extraction of factors, one factor was extracted that contributes to explain 83.16% of the total variance (as in the original article) (consult appendix B).

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling		**.854**
Bartlett's Test of Sphericity	Approx. Chi-Square	793.905
	df	6
	Sig.	**.000**

TABLE 50: KMO AND BARTLETT'S TEST OF REFERRAL VALUE

Source – Own elaboration based on SPSS results

- **Influence value**

The KMO is 0.69 (table 51) which is an acceptable level of adequacy of the correlation between variables. The bartlett's T test of sphericity allows to reject the null of hypothesis of not correlations between original variables (because sig=0.00<0.05). When it comes to the analysis of the factors extraction, one factor was extracted that explain 52.35% of the total variance (only one factor as it was proposed in the original article) (consult appendix B).

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling		**.691**
Bartlett's Test of Sphericity	Approx. Chi-Square	173.245
	df	6
	Sig.	**.000**

TABLE 51: KMO AND BARTLETT'S TEST OF INFLUENCE VALUE

Source – Own elaboration based on SPSS results

∝ Knowledge value

The KMO is 0.81 (table 52) which is a meritorious level of adequacy of the correlations between variables. Analysing bartlett's T test of sphericity, it is possible to see that the null hypothesis is rejected since sig=0.000<0.05 and therefore, there is correlations between initial variables. In addition, factors can be extracted and one factor was extracted that explains 82.21% of the total variance (consult appendix B).

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling		**.812**
Bartlett's Test of Sphericity	Approx. Chi-Square	1000.080
	df	6
	Sig.	**.000**

TABLE 52: KMO AND BARTLETT'S TEST OF KNOWLEDGE VALUE

Source – Own elaboration based on SPSS results

6.5. Regression Analysis

The main goal of this analysis is to understand how the studied constructs and its dimensions affect each engagement dimension (consumer engagement lifetime value, consumer engagement referral value, consumer engagement influential value and consumer engagement knowledge value) and, also how engagement affects the different dimensions of co-creation.

With this purpose, it was studied the impact of the different engagement antecedents (in-flight characteristics, brand experience, brand love and customer-to-customer interaction) on each engagement dimension which constitutes four different models and also the impact of engagement in co-creation represented by another different model.

Model 1 aims to explain the effect of in-flight characteristics on consumer engagement. Model 2 intendents to examine the impact of customer-to-customer interaction on consumer engagement. Model 3 goal is to explain the influence of brand experience on consumer engagement. Model 4 pretends to explain the impact of brand love on consumer engagement. Finally, model 5 examines how the consumer engagement influences co-creation. Note that for each model, all variables were introduced simultaneously through the method enter meaning that all independent variables are entered in the equation.

- Model 1: The effect of in-flight characteristics on consumer engagement

$$\hat{Y} = \beta_0 + \beta_1 * AAQ + \beta_2 * AT + \beta_3 * AF + \beta_4 * ACP + \beta_5 * AOL + \beta_6 * AC + \beta_7 * AO + \beta_8 * AN + \varepsilon \quad \text{(I)}$$

$$\hat{Y} = CECR, CECK, CECI, CECL$$

- Model 2: The effect of customer-to-customer interaction on consumer engagement

$$\hat{Y} = \beta_0 + \beta_1 * C2C + \varepsilon \quad \text{(II)}$$

$$\hat{Y} = CECR, CECK, CECI, CECL$$

- Model 3: The effect of brand experience on consumer engagement

$$\widehat{Y} = \beta_0 + \beta_1 * BES + \beta_2 * BEA + \beta_3 * BEB + \beta_4 * BEI + \varepsilon \quad \text{(III)}$$

$$\hat{Y} = CECR, CECK, CECI, CECL$$

- Model 4: The effect of brand love on consumer engagement

$$\widehat{Y} = \beta_0 + \beta_1 * BL + \varepsilon \quad \text{(IV)}$$

$$\hat{Y} = CECR, CECK, CECI, CECL$$

- Model 5: The effect of consumer engagement on co-creation

$$\widehat{Y} = \beta_0 + \beta_1 * CECL + \beta_2 * CECR + \beta_3 * CECI + \beta_4 * CECK + \varepsilon \quad \text{(V)}$$

$$\hat{Y} = Meaningfulness, collaboration, contribution, recognition, affective\ response$$

To recap the investigation hypothesis

Hypothesis 1 (H1): In-flight characteristics have a positive and significant impact on consumer engagement with airline companies.

H1a: Air quality (AAQ) has a positive and significant impact on the consumer engagement.

H1b: Temperature (AT) has a positive and significant impact on the consumer engagement.

H1c: Food (AF) has a positive and significant impact on the consumer engagement.

H1d: Classes on plane (ACP) has a positive and significant impact on the consumer engagement.

H1e: Overall layout (AOL) has a positive and significant impact on the consumer engagement.

H1f: Crew (AC) has a positive and significant impact on the consumer engagement.

H1g: Odour (AO) has a positive and significant impact on consumer engagement.

H1h: Noise (AN) has a positive and significant impact on consumer engagement.

Hypothesis 2 (H2): Customer-to-customer interaction (C2C) has a positive and significant impact on consumer engagement with airline companies.

Hypothesis 3 (H3): Brand Experience has a positive and significant impact on consumer engagement with airline companies.

H3a: Brand experience sensory (BES) has a positive and significant impact on consumer engagement.

H3b: Brand experience affective (BEA) has a positive and significant impact on consumer engagement.

H3c: Brand experience behavioural (BEB) has a positive and significant impact on consumer engagement.

H3d: Brand experience intellectual (BEI) has a positive and significant impact on consumer engagement.

Hypothesis 4 (H4): Brand Love (BL) has a positive and significant impact on consumer engagement with airline companies.

Hypothesis 5 (H5): Consumer engagement has a positive and significant impact on co-creation with airline companies.

H5a: Consumer engagement lifetime value (CECL) has a positive and significant impact on co-creation.

H5b: Consumer engagement referral value (CECR) has a positive and significant impact on co-creation.

H5c: Consumer engagement influence value (CECI) has a positive and significant impact on co-creation.

H5d: Consumer engagement knowledge value (CECK) has a positive and significant impact on co-creation.

Verification of the assumptions

Before conducting regression analysis, it is necessary to confirm that the regression analysis provides valid results which, in turn, implies to confirm that for each regression the assumptions are meet.

First of all, it is important to highlight that there are two types of regressions- simple linear regression (with only one independent variable used to explain the dependent variable) and multiple linear regression (with more than one independent variable used to explain the dependent one).

For simple linear regression, the data needs to meet the assumptions 1 to 5, meanwhile for multiple linear regression, the data needs to meet more assumptions 1 to 7.

Assumptions

1) **Linearity of the relationship between X and Y**

The theoretical model can be written in a linear way meaning that the β_s can not be expressed for example as β^2

$$y = \beta_0 + \beta_1 \times X_1 + \beta_2 \times X_2 + \beta_i \times X_i + \varepsilon \qquad (VI)$$

$i = 0,1,2, \dots, k$

2) **The mean of the residual component of the model is zero**

$$E(\varepsilon_\iota) = 0$$

Through analysing the **residuals statistics table**, available in appendix C for each model tested and highlighted in bold it is possible to see that the assumption holds for each model.

3) The independent variables are not correlated with the residual terms

$$Cov\ (\varepsilon_\iota, X_k) = 0$$

Regarding **correlations table**, available in appendix C, for each model tested, it can be seen (and it is in bold) that the pearson's coefficient exhibiting the relationship between the unstandardized residual and the independent variables equals zero for each regression meaning that this assumption also holds.

4) The variance of the random term is constant: Homoskedasticity

This assumption implies to the analysis of the scatterplot and see if alongside y=0 the points are getting closer or dispersing more and more of the linear line. If not, then the assumption holds By using the scatterplot, available in Appendix C, one can see that the variance of the random term is homogeneous. It happens because the errors do not increase either decrease as the dependent variable increases (Sarstedt and Mooi, 2014).

5) Normality of the residuals

Through examining each model's histogram and normal P-Plot ,available in appendix C, one can see that the errors follow a normal curve and therefore the data is normally distributed (or tend to be normal distributed). Moreover, accordingly with central limit theorem, a distribution follows an approximately normal distribution as the sample size gets larger. In this example, the sample size is 225 answers which is higher than the 30 – minimum sample size necessary to use central limit theorem.

6) There is no autocorrelation among the residual terms

For this assumption to hold, the value of the Durbin-Watson should be close to two. Examining the Durbin-Watson value for each regression (on model summary's table, available in appendix C and in bold), it is possible to confirm that the estimating values for this coefficient are approximated to 2 meaning that there is no autocorrelation between the errors.

7) There is no correlation among the explanatory variables

In the coefficients table, available in appendix C, one can see that Variance Inflation Factor (VIF) assumes values significantly lower than 10 and tolerance (TOL) is higher than 0,1 in each.For both reasons this assumption also holds.

Overview of the regressions

After analysing all regressions, it is possible to see that all regressions are valid (all of them fulfil all assumptions that are need either they are linear or multiple regressions) and moreover, all of them exhibit a good model fit except Customer-to-customer interaction (C2C) with consumer engagement lifetime value (CECL).

Note that, the chosen significance value is 0.05 which is the mostly commonly used in the studies (Sarstedt and Mooi, 2014).

6.5.1. Lifetime value (CECL) as dependent variable

- **In-flight as independent variable**

Model Fit (Anova, R^2 and adjusted R^2)

First of all, the model fit is analysed through ANOVA test table and for the value of sig. Since sig=0,000<0.05 (significance value) (consult appendix C) then it is rejected the null hypothesis that all model coefficients equals zero, which, therefore means that at least some of that independent variables are important to explain the dependent variable. In this analysis, it means that (at least) some in-flight dimensions are important in explaining consumer engagement lifetime value.

Moreover, to better understand the model fit, it is important to look at R^2 and adjusted R^2. The value of R^2 is 0.32 which means that 32% of the variance of the variable consumer lifetime value is explained by the dimensions of the in-flight construct. In addition, adjusted R^2 exhibits a relatively lower value than R^2 of 30% signifying that many independent variables were used and some of them could be removed.

Individual parameters

Regarding the coefficient table, and analysing the significant values column it is possible to conclude that air quality (AAQ) and crew (AC) have a role in explaining consumer engagement lifetime value since its p-value <0.05 (0.05 was the chosen significance value)(table 52). Meanwhile, temperature (AT), food (AF), overall layout (AL2, AL3, AL5), classes on the plane (AL1, AL4), odour (AO) and noise (AN) are not relevant explanatory

variables since its p-value>0.05 (above the commonly used level) and therefore, the null hypothesis is not rejected.

The table 53 also shows which of the independent variables have a higher impact on consumer engagement lifetime value. This impact is measured by looking for the standardized coefficients, the Beta. Regarding the variables with impact on CECL, one can understand that the crew (AC) has a higher impact on CECL (β=0.442) followed by air quality (AAQ) (β=0.184). Since both values have plus sign before, it means that both positively influence CECL.

	Unstandardized Coefficients		**Standardized Coefficients**	**t**	**Sig.**	**Collinearity Statistics**		**Adjusted R Square**
	B	Std. Error	Beta			TOL	VIF	
(constant)	0.826	0.423	-	1.952	0.052	-	-	**29.60%**
Air Quality (AAQ)	0.275	0.113	**0.184**	2.442	**0.015**	0.559	1.790	
Temperature (AT)	0.012	0.084	0.010	0.143	0.887	0.601	1.665	
Food (AF)	-0.050	0.051	-0.061	-0.989	0.324	0.831	1.204	
Crew (AC)	0.463	0.068	**0.442**	6.843	**0.000**	0.755	1.324	
Odour (AO)	-0.129	0.096	-0.093	-1.336	0.183	0.658	1.519	
Noise (AN)	0.066	0.072	0.066	0.924	0.356	0.623	1.606	
Overall layout (AOL)	0.045	0.062	0.054	0.724	0.470	0.559	1.790	
Classes on the plane (ACP)	0.008	0.047	0.010	0.164	0.870	0.838	1.193	

TABLE 53: COEFFICIENTS TABLE OF ATMOSPHERICS IN-FLIGHT CHARACTERISTICS ON LIFETIME VALUE

Source – Own elaboration based on SPSS results

∝ Customer-to-customer interaction as independent variable

Model Fit (Anova, R^2 and adjusted R^2)

First of all, looking for ANOVA test table, available in appendix C, to the value of sig one can see that the model does not contribute to explain the dependent variable (CECL) since sig>0.05 and for that reason the analysis should not be continued.

Beside the test can not be conducted, the SPSS produced the results which can be viewed in appendix C (but the relationship between both variables is not verified).

∝ Brand Experience as independent variable

Model Fit (Anova, R^2 and adjusted R^2)

First of all, ANOVA test table, available in C shows that at least one of the independent variables is important in explaining the dependent variables (consumer engagement lifetime value) since sig=0.000 which is lower than the significance value (consult appendix C).

The independent variables contribute to explain 42.3% (model summary table available in appendix C) of the total variance of the consumer engagement lifetime value (since R^2 =0.423%). Regarding adjusted R^2 one can see that 41.6% (table 54) which is relatively quiet lower value in comparison with the value of R^2 meaning that the addition of another independent variable lower the value of adjusted R^2.

Individual parameters

Analysing the coefficients' table (table 54 and also available in appendix C) one can conclude that the dimensions of sensory (BES) and affective (BEA) are the ones that have a role in explaining consumer engagement lifetime value (sig=0.043 and sig=0.000, respectively which are lower than the a.

The other two dimensions of brand experience (brand experience intellectual (BEI) and brand experience behavioural (BEB) do not have an influential role in explaining consumer engagement lifetime value (since its p-value are higher than a).

Regarding the magnitude of impact of each variable, it is possible to conclude that affective is the one that most affects lifetime value (β=0.427) followed by the sensory dimension (β=0.160).

		Unstandardized Coefficients		**Standardized Coefficients**	t	**Sig.**	**Adjusted R Square**
		B	Std. Error	Beta			
(constant)		1.314	0.205		6.408	0.000	**41.60%**
Brand Experience	**Sensory**	0.168	0.083	**0.160**	2.034	**0.043**	
	Affective	0.418	0.081	**0.427**	5.130	**0.000**	
	Intellectual	0.002	0.095	0.002	0.021	0.984	
	Behavioural	0.152	0.090	0.131	1.692	0.092	

TABLE 54: COEFFICIENTS TABLE OF BRAND EXPERIENCE ON LIFETIME VALUE

Source – Own elaboration based on SPSS results

∝ Brand Love as independent variable

Model Fit (Anova, R^2 and adjusted R^2)

Examining the ANOVA test table, available in appendix C it is possible to see that the variable Brand Love contributes to explain consumer engagement lifetime value (p-value equals 0.000 which is lower than the significance value).

Secondly, regarding adjusted R^2, available on model's summary table, on appendix C, one can conclude that brand love contributes to explain 38% of the dependent variable (lifetime value).

As a result of this, the model has a good fit and, afterwards, it is accurate to proceed with the analysis of the performance of the coefficient's.

Individual parameters

By looking for p-value which is 0.000 (on coefficient's test table, table 55) lower than the significance value, one can see that the regression coefficient is not equal to zero (since the null hypothesis was rejected that postulates that individuals' coefficients are equal to zero). In this model, the variable brand love is positively related with the consumer engagement lifetime value (the value of the standardized beta is positive). This means that when passengers do love an airline brand, their engagement is significantly higher on average. The beta (β = 0.619) which represents the relative strength of the Brand Love (BL) on consumer engagement lifetime value.

	Unstandardized Coefficients		**Standardized Coefficients**	t	**Sig.**	**Adjusted R Square**
	B	Std. Error	Beta			
(constant)	1.676	0.164	-	10.203	0.000	**38.0%**
Brand Love (BL)	0.672	0.057	**0.619**	11.764	**0.000**	

TABLE 55: COEFFICIENTS TABLE OF BRAND LOVE ON LIFETIME VALUE

Source – Own elaboration based on SPSS results

6.5.1. Referral value (CECR) as dependent variable

- **In-flight as independent variable**

Model Fit (Anova, R^2 and adjusted R^2)

For the model Fit it is necessary to examine ANOVA test table, available in appendix C to test if there are important variables that have a role in explaining the dependent variable – customer engagement referral value. Regarding the sig. value which is 0.00 and therefore lower than significance level of 0.05, the null hypothesis is rejected which means that at least one of the variables is convenient in explaining the dependent variables – consumer engagement referral value (CECR).

With this conclusion and to better understand which is the percentage that the independent variables occupy in explaining the dependent variables, R^2 value should be taken in account. In this case, roughly 12% (analyse model summary table available in appendix C of the total variance is explained by the in-flight variables (which is a very low value).

Furthermore, an even lower value of 9% is the adjusted R^2 representing the value explained by the independent variables not considering some that could be removed (as many independent variables were inserted).

Individual parameters

Examining the coefficient table and more specifically the column of the significant values (sig.), one can conclude that only the behaviour of the crew (AC) item is useful in explaining customer engagement referral value (sig=0.001<0.05)(table 56). In addition, by looking to the standardized coefficient beta, one can conclude how the crew influences the consumer engagement referral value, β=0.24. The sign of the beta is positive and therefore the crew positively influences the consumer engagement referral value.

At the same time, all other variables of in-flight conditions such as air quality (AAQ), temperature (AT), food (AF), classes on the plane (ACP), overall layout (AOL), odour (AO) and noise (AN) do not influence the consumer engagement referral value since sig>0.05.

	Unstandardized Coefficients		**Standardized Coefficients**	t	**Sig.**	Collinearity Statistics		**Adjusted R Square**
	B	Std. Error	Beta			TOL	VIF	
(constant)	0.562	0.547	-	1.029	0.305	-	-	**9.10%**
Air Quality (AAQ)	0.165	0.145	0.097	1.137	0.257	0.559	1.790	
Temperature (AT)	-0.048	0.108	-0.037	-0.444	0.657	0.601	1.665	
Food (AF)	0.081	0.065	0.087	1.237	0.217	0.831	1.204	
Crew (AC)	0.285	0.087	**0.240**	3.262	**0.001**	0.755	1.324	
Odour (AO)	0.002	0.124	0.001	0.013	0.990	0.658	1.519	
Noise (AN)	0.015	0.093	0.013	0.163	0.871	0.623	1.606	
Overall layout (AOL)	0.073	0.080	0.078	0.912	0.363	0.559	1.790	
Classes on the plane (ACP)	0.103	0.061	0.118	1.696	0.091	0.838	1.193	

TABLE 56: COEFFICIENTS TABLE OF ATMOSPHERICS IN-FLIGHT CHARACTERISTICS ON REFERRAL VALUE

Source – Own elaboration based on SPSS results

∝ Customer-to-customer interaction as independent variable

Model Fit (Anova, R^2 and adjusted R^2)

Regarding ANOVA test table, available in appendix C, it is possible to see that significant value is lower than the critical value (sig=0.000 < 0.05) and therefore the variable is important in explaining customer engagement referral value.

Analysing adjusted R^2 , on model summary table in appendix C, one can see that the variable only contributes to explain 5.8% of the total variance of the consumer referral value which is a very low percentage meaning that this variable – C2C has a small influence on consumer engagement referral value.

Individual parameters

Analysing the individual parameters contribution, on coefficients table 57, one can see that this variable does contributes to the referral value since the sig is 0.000 which is lower than the significance value of 0.05 (as it was seen previously on the model fit). Moreover, C2C interaction has a positive impact of 0.249 (beta value on standardized coefficients' column) on CECR.

	Unstandardized Coefficients		**Standardized Coefficients**	t	**Sig.**	**Adjusted R Square**
	B	Std. Error	Beta			
(constant)	2.178	0.207	-	10.525	0.000	**58%**
Customer-to-customer interaction (C2C)	0.328	0.088	**0.249**	3.835	**0.000**	

TABLE 57: COEFFICIENTS TABLE OF CUSTOMER-TO-CUSTOMER INTERACTION ON REFERRAL VALUE

Source – Own elaboration based on SPSS results

∝ Brand Experience as independent variable

Model Fit (Anova, R^2 and adjusted R^2)

First of all, ANOVA test table, available in appendix C, exhibits that at least one of the independent variables is useful to explain the dependent variable (consumer engagement referral value) because sig=0.00 which is lower than the significance value of 0.05.

All the independent variables contribute to explain 22% (R^2=0.22) of the model (analyse model's summary table available in appendix C). Regarding adjusted R^2 one can see that the value is relatively lower (in comparison to R^2) which is 20.6% determining that the insertion of more independent variables could reduce the level of explanation of the model.

Individual parameters

Regarding coefficient's table (table 58) one can see that brand experience behavioural is the only variable that contributes to customer engagement referral value (since sig=0.000<0.05).

The other three dimensions of the brand experience, sensory, affective and intellectual does not contribute to this dependent variable (its sig is higher than the significance value).

By analysing the magnitude of impact of behavioural dimension on referrals, it is possible to see that the β=0.354 (standardized coefficient beta, highlighted in appendix C).

		Unstandardized Coefficients		**Standardized Coefficients**	t	**Sig.**	Collinearity Statistics		**Adjusted R Square**
		B	Std. Error	Beta			TOL	VIF	
(constant)		0.963	0.270	-	3.560	0.000	-	-	
Brand Experience	Sensory	0.156	0.109	0.132	1.430	0.154	0.419	2.389	
	Affective	-0.103	0.107	-0.093	-0.958	0.339	0.377	2.653	**20.60%**
	Intellectual	0.163	0.125	0.115	1.304	0.194	0.456	2.194	
	Behavioural	0.467	0.119	**0.354**	3.929	**0.000**	0.438	2.2282	

TABLE 58: COEFFICIENTS TABLE OF BRAND EXPERIENCE ON REFERRAL VALUE

Source – Own elaboration based on SPSS results

∝ Brand Love as independent variable

Model Fit (Anova, R^2 and adjusted R^2)

First of all, analysing the ANOVA test table, available in appendix C it is possible to see that the variable Brand Love contributes to explain consumer engagement referral (significant value equals 0.000 which is lower than the significance value).

Secondly, regarding adjusted R^2, available on model's summary table on appendix C one can conclude that brand love contributes to explain 18% of engagement referral value (adjusted R^2 equals 0.18).

Individual parameters

Analysing Brand Love coefficient, it is possible to see that the sig value is 0.000 (on coefficient's test table, available in appendix C and table 59) lower than the significance value, and therefore, the regression coefficient is not equal to zero (since the null hypothesis was rejected that postulates that individual coefficient is equal to zero). In this model, the variable brand love is positively related with the consumer engagement referral value (the sign of the standardized beta is positive) and its strength is 0.430 (β = 0.430).

This means that when consumers do love a brand, it will increase the consumer referral value.

	Unstandardized Coefficients		**Standardized Coefficients**	t	**Sig.**	**Adjusted R Square**
	B	Std. Error	Beta			
(constant)	1.475	0.213	-	6.908	0.000	**18.10%**
Brand Love (BL)	0.528	0.074	**0.430**	7.115	**0.000**	

TABLE 59: COEFFICIENTS TABLE OF BRAND LOVE ON REFERRAL VALUE

Source – Own elaboration based on SPSS results

6.5.2. Influence value (CECI) as dependent variable

- **In-flight as independent variable**

Model Fit (Anova, R^2 and adjusted R^2)

ANOVA test table, available in appendix C let conclude if there are important independent variables which can explain the dependent variable. Regarding the value of sig=0.000, one is forced to reject the null hypothesis which was the intention. Secondly, regarding R^2 it is possible to see that approximately 20% of variation in the dependent variable is explained by the model proposed. Analysing adjusted R^2, one can see a substantial lower value of 17% which can occur when many independent variables were inserted in the model.

All of these values revealed information about the performance of the overall model and to a more detailed analysis it is necessary to see the individual parameters.

Individual parameters

Having in mind the contribution of the individual parameters, it is necessary to begin by looking at the column of the significant values to see which of the independent variables have a role in explaining influential value. In this case, only the crew (AC) variable could explains if the consumer engages in influential value or not (sig<0.05). Regarding the column of the standardized betas (roughly β=0.24), one can conclude the influence that this variable has on influence value. The crew positively influences consumer engagement in influential value since the sign of the beta is positive. Meanwhile, all other variables considered (air quality (AAQ), temperature (AT), food (AF), classes on the plane (ACP), overall layout (AOL), odour (AO) and noise (AN) are not relevant in explaining consumer engagement in influential value since the sig lead not to reject the null hypothesis of betas equal to zero.

	Unstandardized Coefficients		**Standardized Coefficients**	t	**Sig.**	Collinearity Statistics		**Adjusted R Square**
	B	Std. Error	Beta			TOL	VIF	
(constant)	0.600	0.427	-	1.405	0.162	-	-	**17.10%**
Air Quality (AAQ)	0.304	0.114	0.219	2.681	0.008	0.559	1.790	
Temperature (AT)	0.010	0.085	0.009	-0.116	0.908	0.601	1.665	
Food (AF)	0.042	0.051	0.054	0.814	0.416	0.831	1.204	
Crew (AC)	0.229	0.068	**0.235**	3.347	**0.001**	0.755	1.324	
Odour (AO)	-0.095	0.097	-0.073	-0.973	0.332	0.658	1.519	
Noise (AN)	0.019	0.072	0.020	0.264	0.792	0.623	1.606	
Overall layout (AL2, AL3, AL5)	0.108	0.062	0.142	1.736	0.084	0.559	1.790	
Classes on the plane (AL1,AL4)	-0.018	0.047	-0.025	-0.382	0.703	0.838	1.193	

TABLE 60: COEFFICIENTS TABLE OF ATMOSPHERICS IN-FLIGHT CHARACTERISTICS ON INFLUENCE VALUE

Source – Own elaboration based on SPSS results

∝ Customer-to-customer interaction as independent variable

Model Fit (Anova, R^2 and adjusted R^2)

First of all, analysing ANOVA test table, available in appendix C one can conclude that the variable C2C is important in explaining the consumer engagement intellectual value (since sig=0.001<0.005 and therefore, the null hypothesis of all individual parameters are equal to zero is rejected).

The model contributes to explain roughly 5% (see adjusted R^2 on appendix C) of the dependent variable which is a very low percentage signifying that this variable has a low impact on consumer engagement influence value.

Individual parameters

On coefficient's test table 61 and also available in appendix C it is possible to see that C2C has an impact on consumer engagement influence value (since sig=0.000<0.05) although its impact is very low as it was seen before. The impact that the independent variable has on

consumer engagement influence value is positive and it is 0.225 (standardized coefficient beta's value).

	Unstandardized Coefficients		**Standardized Coefficients**	t	**Sig.**	**Adjusted R Square**
	B	Std. Error	Beta			
(constant)	2.228	0.170	-	13.094	0.000	**4.60%**
Customer-to-customer interaction (C2C)	0.242	0.070	**0.225**	3.441	**0.001**	

TABLE 61: COEFFICIENTS TABLE OF CUSTOMER-TO-CUSTOMER INTERACTION ON INFLUENCE VALUE

Source – Own elaboration based on SPSS results

∝ Brand Experience as independent variable

Model Fit (Anova, R^2 and adjusted R^2)

Regarding ANOVA test table, available in appendix C, it is possible to see that the null hypothesis is rejected (sig equals zero and therefore is lower than the significance value). It means that the model is a good fit of the data.

In addition, regarding model summary's table, available in appendix C, and the value of the R^2 which is 41.5% meaning that the model can explain roughly 41,5% of the dependent variable, consumer engagement influence value. The adjusted R^2 is 40.4% which shows a relatively lower value of the R^2 as a result of the insertion of one or more independent variables.

Individual parameters

Analysing coefficient's table (table 62) one can see that each independent variable is examined separately. First of all, regarding significant values, one can see that brand experience sensory (BES) and brand experience behavioural (BEB) are useful to explain the dependent variable (its sig (0.001 and 0.000, respectively) are lower than the significance value (α equals 0.005). Meanwhile, brand experience affective (BEA) and brand experience intellectual (BEI) do not contribute to explain this variable since its sig is higher than the significance value.

Regarding the impact of the independent variables that contribute to explain the consumer engagement influence value, one can see that behavioural experience (BEB) contributes more and positively (β=0.315) than sensory experience (BES) (β=0.277).

		Unstandardized Coefficients		**Standardized Coefficients**	t	**Sig.**	Collinearity Statistics		**Adjusted R Square**
		B	Std. Error	Beta			TOL	VIF	
(constant)		0.505	0.191	-	2.638	0.009	-	-	
Brand Experience	**Sensory**	0.268	0.077	**0.277**	3.477	**0.001**	0.419	2.389	
	Affective	0.028	0.076	0.031	0.366	0.715	0.377	2.653	**40.40%**
	Intellectual	0.131	0.088	0.113	1.479	0.141	0.456	2.194	
	Behavioural	0.340	0.084	**0.315**	4.042	**0.000**	0.438	2.2282	

TABLE 62: COEFFICIENTS TABLE OF BRAND EXPERIENCE ON INFLUENCE VALUE

Source – Own elaboration based on SPSS results

∝ **Brand Love as independent variable**

Model Fit (Anova, R^2 and adjusted R^2)

Through analysing ANOVA test table, available in appendix C, it is possible to see that the variable Brand Love contributes to explain consumer engagement influence value (sig. value equals 0.000 which is lower than the chosen significance value of 0.05).

Secondly, regarding adjusted R^2, available on model's summary table on appendix C, it is possible to see that brand love contributes to explain 34% of engagement influence value which is a moderate value.

Individual parameters

Analysing Brand Love coefficient, it is possible to see that the significance value is 0.000 (on coefficient's test table, table 62 and available on appendix C) lower than the significance value, and therefore, the regression coefficient is not equal to zero and is important in explaining the dependent variable.

The independent variable, brand love is positively related with the consumer engagement referral value regarding the sign of the standardized coefficient beta and with a

strength of relation with the dependent variable of 0.587 (β = 0.587) (coefficient's test table, table 63).

	Unstandardized Coefficients		**Standardized Coefficients**	t	**Sig.**	**Adjusted R Square**
	B	Std. Error	Beta			
(constant)	1.159	0.156	-	7.410	0.000	**34.10%**
Brand Love (BL)	0.589	0.054	**0.587**	10.824	**0.000**	

TABLE 63: COEFFICIENTS TABLE OF BRAND LOVE ON INFLUENCE VALUE

Source – Own elaboration based on SPSS results

6.5.3. Knowledge value (CECK) as dependent variable

∝ **In-flight as independent variable**

Model Fit (Anova, R^2 and adjusted R^2)

Starting by looking at ANOVA test table, available in appendix C, one can conclude at least one of the independent variable is convenient to explain the dependent variable (consumer engagement knowledge value) since sig=0.000 which is lower than the critical value.

Regarding R^2, in the model summary table available in appendix C, one can see that the independent variables of the in-flight explain 13.6% of the variable consumer engagement knowledge value.

Moreover, taking a look in adjusted R^2, one can see that is 10.3% exhibiting the total variance that the useful independent variables can explain of the model.

Both value reveal information about the model fit in general and for see the individual performance of each parameter coefficient's table should be analysed.

Individual parameters

When studying the coefficients table (table 64 and available in appendix C), one can comprehend that overall layout (AOL) is the only that have a role in the explanation of consumer engagement knowledge, as the value of the sig (<0.05) and, therefore, the null hypothesis is rejected. Air quality (AAQ), Temperature (AT), Food (AF), Classes on the

plane (ACP), Crew (AC), Odour (AO) and Noise (AN) are not useful to explaining engagement with knowledge value.

	Unstandardized Coefficients		**Standardized Coefficients**	t	**Sig.**	Collinearity Statistics		**Adjusted R Square**
	B	Std. Error	Beta			TOL	VIF	
(constant)	0.220	0.601	-	0.367	0.714	-	-	**10.40%**
Air Quality (AAQ)	0.303	0.160	0.161	1.898	0.059	0.559	1.790	
Temperature (AT)	0.0007	0.119	0.005	0.058	0.953	0.601	1.665	
Food (AF)	0.123	0.072	0.119	1.707	0.089	0.831	1.204	
Crew (AC)	0.141	0.096	0.107	1.471	0.143	0.755	1.324	
Odour (AO)	-0.020	0.137	-0.011	-0.144	0.886	0.658	1.519	
Noise (AN)	0.000	0.102	0.000	-0.005	0.996	0.623	1.606	
Overall layout (AOL)	0.183	0.088	**0.177**	2.084	**0.038**	0.559	1.790	
Classes on the plane (ACP)	0.024	0.067	0.025	0.357	0.721	0.838	1.193	

TABLE 64: COEFFICIENTS TABLE OF ATMOSPHERICS IN-FLIGHT CHARACTERISTICS ON KNOWLEDGE VALUE

Source – Own elaboration based on SPSS results

∝ Customer-to-customer interaction as independent variable

Model Fit (Anova, R^2 and adjusted R^2)

When analysing ANOVA test table, available in appendix C, it is possible to see that the null hypothesis is rejected (sig= 0.000< 0.05) and therefore the model represents a good fit of the data.

The model contributes to explain 6.4% (R^2 of the model summary's table, available in appendix C, of the dependent variable which is consumer engagement knowledge value (CECK). Regarding adjusted R^2 which is the contribution of the overall independent variables to explain the dependent variable discounting the insertion of variables that does not contribute that much to explain overall model it is possible to see that in reality the independent variables contribute in 6.0% to explain the dependent variable (adjusted R^2 = 6.0%).

Individual parameters

Regarding coefficient's test table (table 65), one can see that the variable C2C contributes in explaining the consumer engagement knowledge value (sig=0.000< 0.05). However, this conclusion was already taken when the model fit was previously analysed. In this case, customer-to-customer interaction (C2C) has a standardized beta of 0.254 which is the impact that this variable has on the dependent variable.

	Unstandardized Coefficients		**Standardized Coefficients**	t	**Sig.**	**Adjusted R Square**
	B	Std. Error	Beta			
(constant)	1.987	0.228	-	8.711	0.000	**6.0%**
Customer-to-customer interaction (C2C)	0.370	0.094	**0.254**	3.921	**0.000**	

TABLE 65: COEFFICIENTS TABLE OF CUSTOMER-TO-CUSTOMER INTERACTION ON KNOWLEDGE VALUE

Source – Own elaboration based on SPSS results

∝ Brand Experience as independent variable

Model Fit (Anova, R^2 and adjusted R^2)

First of all, to confirm that the model is suitable in explaining the dependent variable, consumer engagement knowledge value (CECK) it is necessary to look for ANOVA test table, available in appendix C. When examining ANOVA test table, the significance value is 0.000 which is lower than the significance value and, therefore, the null hypothesis is rejected meaning the model is a good fit of the data.

Secondly, by regarding model summary's table, available in appendix C, it is possible to see that the independent variables of the brand experience contribute to explain 27.1% (R^2 value) of the dependent variable (consumer engagement knowledge value). Furthermore, the value of the adjusted R^2 is 25.8% showing that the insertion of one more independent variable could have reduced the overall capacity of the model.

Individual parameters

On coefficient's table (table 66), it is possible to see that almost all independent variables of brand experience are important explaining the dependent variable (consumer

engagement knowledge value) since the significance value of each individual variable is lower than the critical value. Regarding that, Sensory (BES), Intellectual (BEI) and Behavioural (BEI) are the variables that influence knowledge value. On the other side, Affective (BEA) is the only variable that does not contribute to knowledge value.

Analysing the impact of each individual variable, it is possible to see that the variable with higher impact is intellectual experience (BEI) β=0.336, followed by behavioural experience (BEB) β=0.254 and finally sensory experience β=0.198. Examining all betas signs, it is possible to conclude that all variables contribute positively to knowledge value since all betas sign are a plus.

		Unstandardized Coefficients		**Standardized Coefficients**	t	**Sig.**	Collinearity Statistics		**Adjusted R Square**
		B	Std. Error	Beta			TOL	VIF	
(constant)		0.418	0.288	-	1.448	0.149	-	-	
Brand Experience	**Sensory**	0.258	0.116	**0.198**	2.221	**0.027**	0.419	2.389	
	Affective	-0.314	0.115	-0.257	-2.741	0.007	0.377	2.653	**25.80%**
	Intellectual	0.525	0.133	**0.336**	3.941	**0.000**	0.456	2.194	
	Behavioural	0.371	0.127	**0.254**	2.926	**0.004**	0.438	2.2282	

TABLE 66: COEFFICIENTS TABLE OF BRAND EXPERIENCE ON KNOWLEDGE VALUE

Source – Own elaboration based on SPSS results

∝ Brand Love as independent variable

Model Fit (Anova, R^2 and adjusted R^2)

First of all, ANOVA test (available in appendix C) lead us to reject the null hypothesis that postulates that all regression coefficients are equal to zero. Afterwards, if not equal to zero, it is possible to continue with the analysis. Secondly, regarding the adjusted R^2 (model summary's table, available in appendix C). one can see that variable brand love contributes to explain the consumer engagement knowledge value since it values is 20.8%. Although this value is quite low since it is lower than the 25% rule of thumb in marketing researches (Sarsdedt and Mooi, 2014).

Individual parameters

Regarding the contribution of the single independent variable, one can conclude that brand love as well as the constant term should be included in the equation of the model since their significant value equals zero which is lower than the significance value (coefficient's test table, table 67 and available in appendix C Furthermore, analysing the effect that brand love has on consumer engagement knowledge value, one can see that it is positive (the sign of the standardized beta is positive). Beyond that, brand love has a relationship of 0.460 (standardized coefficient beta β = 0.460) with consumer engagement knowledge value.

	Unstandardized Coefficients		**Standardized Coefficients**	t	**Sig.**	**Adjusted R Square**
	B	Std. Error	Beta			
(constant)	1.116	0.232	-	4.817	0.000	**20.80%**
Brand Love (BL)	0.623	0.081	**0.460**	7.737	**0.000**	

TABLE 67: COEFFICIENTS TABLE OF BRAND LOVE ON KNOWLEDGE VALUE

Source – Own elaboration based on SPSS results

6.5.4. Meaningfulness (CCM) as dependent variable

Model Fit (Anova, R^2 and adjusted R^2)

By examining, ANOVA test table, available in appendix c, one can see that the sig. value equals zero which is lower than the significance value and therefore the null hypothesis which assumes that all beta are equal to zero is rejected. Then, regarding the adjusted R^2 (on model's summary table, available in appendix C it is possible to see that the model contributes to explain 47.7% of consumer co-creation meaningfulness.

This means that the model represents a good fit and that it is possible to proceed with the individual parameters analysis.

Individual parameters

First of all, by looking for the significance values of independent variables and constant (coefficient's table, table 68 and available in appendix C), is it possible to see that lifetime value (CECL), influence value (CECI) and knowledge value (CECK) contribute to explain the variable meaningfulness. It happens because the sig. values of these variables are all zero and,

therefore, lower than the chosen significance value (α=0.05). Furthermore, the variable referral value (CECR) and the constant should not be included in the model since their sig. value is higher than the critical value.

When analysing the individual contribution of the independent variables that contribute to explain the dependent variable, one can see that lifetime value (CECL) is the one with higher relationship with the dependent variable, followed by influence value (CECI) and knowledge value (CECK) since their standardized betas are respectively 0.357 (β_1 = 0.357), 0.241 (β_2 = 0.241) and 0.232 (β_3 = 0.232). All of these variables are positively related with meaningful since their beta sign's is positive.

		Unstandardized Coefficients		**Standardized Coefficients**	t	**Sig.**	Collinearity Statistics		**Adjusted R Square**
		B	Std. Error	Beta			TOL	VIF	
(constant)		-0.053	0.194	-	-0.275	0.784	-	-	
Consumer Engagement	**Lifetime value (CECL)**	0.350	0.057	**0.357**	6.186	**0.000**	0.699	1.431	
	Influence value (CECI)	0.255	0.071	**0.241**	3.602	**0.000**	0.523	1.912	**47.70%**
	Referral value (CECR)	0.076	0.049	0.088	1.562	0.120	0.738	1.355	
	Knowledge value (CECK)	0.182	0.048	**0.232**	3.815	**0.000**	0.632	1.583	

TABLE 68: COEFFICIENTS TABLE OF CONSUMER ENGAGEMENT ON MEANINGFULNESS

Source – Own elaboration based on SPSS results

6.5.5. Collaboration (CCC) as dependent variable

Model Fit (Anova, R^2 and adjusted R^2)

Beginning by analysing ANOVA test table, available in appendix C, it is possible to see that the null hypothesis that all betas are equal to zero is rejected since sig=0.000 and, therefore, is lower than the critical value regardless of the chosen critical value.

Moreover, adjusted R^2 shows that the overall model is good in explaining the dependent variable since it contributes to explain 46.8% of the total variance of collaboration (model summary's table, available in appendix C.

Individual parameters

Regarding coefficient's test table, table 69 and available in appendix C, one can see that lifetime value (CECL) and influence value (CECI) are important variables in explaining collaboration (CCC) since their sig. value is lower than the chosen significance value of 0.05. All other variables (referral value (CECR) and knowledge value (CECK)) are not useful in explaining collaboration since their sig.value is higher than the significance value.

Afterwards, examining the individual relationship of the independent variables with the dependent, it is possible to see that lifetime value (CECL) is most strongly related with collaboration than influence value (CECI) since their betas are respectively 0.524 ($\beta_1 = 0.524$) and 0.213 ($\beta_1 = 0.213$). Both variables are positively related with the dependent variable since the sign of the standardized coefficients is positive.

		Unstandardized Coefficients		**Standardized Coefficients**	**t**	**Sig.**	**Collinearity Statistics**		**Adjusted R Square**
		B	Std. Error	Beta			TOL	VIF	
(constant)		0.547	0.184	-	2.978	0.003	-	-	
Consumer Engagement	**Lifetime value (CECL)**	0.482	0.054	**0.524**	8.986	**0.000**	0.699	1.431	
	Influence value (CECI)	0.212	0.067	**0.213**	3.164	**0.002**	0.523	1.912	**46.80%**
	Referral value (CECR)	-0.016	0.046	-0.019	-0.342	0.733	0.738	1.355	
	Knowledge value (CECK)	0.084	0.045	0.114	1.853	0.065	0.632	1.583	

TABLE 69: COEFFICIENTS TABLE OF CONSUMER ENGAGEMENT ON COLLABORATION

Source – Own elaboration based on SPSS results

6.5.6. Contribution (CCCon) as dependent variable

Model Fit (Anova, R^2 and adjusted R^2)

First of all, examining ANOVA test table, available in appendix C and more specifically significance value it is possible to conclude that the null hypothesis that assumes that all regression coefficients are zero should be rejected since sig.value is zero and therefore lower than the significance value.

Secondly, the adjusted R^2 is 32.4% (model summary's table, available in appendix C) which is the total variance that the important independent variables in the model can explain of the dependent variable (contribution co-creation (CCCon)).

This model is a good fit and the study of the individual parameters should be conducted.

Individual parameters

Analysing coefficient's table, table 70 in available in appendix C, it is possible to see that the variables lifetime value (CECL), influence value (CECI) and knowledge value (CECK) are important variables in explaining contribution (co-creation contribution dimension) (since sig=0.000). Moreover, the constant is also important in explaining the model since its sig. value is zero. In this case, the only variable that does not contribute to contribution is the engagement referral value since the p-value is 0.354 higher than the significance value.

Analysing the impact of each independent variable, it is possible to see that lifetime value (CECL) is the variable with higher impact ($\beta_1 = 0.242$), followed by influence value ($\beta_2 = 0.234$) and finally knowledge value ($\beta_3 = 0.223$). All variables have a positive sign meaning that their influence on contribution is positive.

		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics		Adjusted R Square
		B	Std. Error	Beta			TOL	VIF	
(constant)		0.836	0.223	-	3.749	0.000	-	-	
Consumer Engagement	**Lifetime value (CECL)**	0.240	0.065	**0.242**	3.678	**0.000**	0.699	1.431	
	Influence value (CECI)	0.251	0.082	**0.234**	3.078	**0.002**	0.523	1.912	**32.40%**
	Referral value (CECR)	0.052	0.056	0.059	0.929	0.354	0.738	1.355	
	Knowledge value (CECK)	0.177	0.055	**0.223**	3.226	**0.001**	0.632	1.583	

TABLE 70: COEFFICIENTS TABLE OF CONSUMER ENGAGEMENT ON CONTRIBUTION

Source – Own elaboration based on SPSS results

6.5.7. Recognition (CCR) as dependent variable

Model Fit (Anova, R^2 and adjusted R^2)

First of all, by analyzing ANOVA test table, available in appendix C, one can see there is at least one independent variable with its regression coefficient being different from zero (since sig=0.00 and therefore is lower than the significance value (α=0.05).

Secondly, regarding adjusted R^2 it is possible to see that the model has an explaining capacity of 22.2% (value of the adjusted R^2 available on model's summary table on appendix C).

Individual parameters

By analyzing coefficient's test table, table 71 and available in appendix C, and the p-values of each independent variable it is possible to conclude that, since sig is lower than the significance value (significance value chosen was 0.05), the lifetime value (CECL) and influence value (CECI) are variables important in explaining recognition (CCR). In addition, the constant is also important in the model since its sig equals 0.000 and, therefore, is lower than the significance value.

The other three independent variables in the model are not useful in explaining the dependent variable of recognition since their sig is higher than the significance value considered and, therefore, the null hypothesis of their betas being zero is not rejected.

To examine the impact that the variables lifetime value (CECL) and influence value (CECI) has on recognition, the standardized coefficient beta should be examined. By studying it, one can see that lifetime value (CECL) has a magnitude of influence of 0.221 and the influence value (CECI) has a magnitude of 0.227 on recognition (CCR).

As in the previous examples, the variable is positively related with recognition (CCR) dependent variable.

		Unstandardized Coefficients		**Standardized Coefficients**	**t**	**Sig.**	**Collinearity Statistics**		**Adjusted R Square**
		B	Std. Error	Beta			TOL	VIF	
(constant)		0.966	0.259	-	3.728	0.000	-	-	
Consumer Engagement	**Lifetime value (CECL)**	0.238	0.076	**0.221**	3.142	**0.002**	0.699	1.431	
	Influence value (CECI)	0.264	0.095	**0.227**	2.783	**0.006**	0.523	1.912	**22.22%**
	Referral value (CECR)	0.089	0.065	0.094	1.366	0.173	0.738	1.355	
	Knowledge value (CECK)	0.076	0.064	0.088	1.183	0.238	0.632	1.583	

TABLE 71: COEFFICIENTS TABLE OF CONSUMER ENGAGEMENT ON RECOGNITION

Source – Own elaboration based on SPSS results

6.5.8. Affective response (CCA) as dependent variable

Model Fit (Anova, R^2 and adjusted R^2)

Beginning by looking for ANOVA test table, available in appendix C it is possible to see that the null hypothesis is rejected (regardless of the chosen critical value) since sig=0.000. As a result of this, there is at least one independent variable which its regression coefficient differs from zero. Therefore, analysing the explaining capacity of the model, one can conclude that the independent variables contribute to explain 36.4% (adjusted R^2, on model's summary table, available in appendix C. is 0,364) of the total variance of the affective component on co-creation.

With these information, it possible to conclude that the model exhibits a good fit and therefore, the independent variables relate quiet well the dependent variable.

Individual parameters

Secondly, regarding coefficient's test table and more specifically the value of sig, one can see that lifetime value (CECL), knowledge value (CECK) (table 72) are important in explaining the dependent variable since sig=0.000 and 0.003 respectively which is therefore, lower than the significance value (a=0.05). The other two variables influence value (CECI) and referral value (CECR) are not useful in explaining the dependent variable since their sig is higher than the significance value and therefore, the null hypothesis is not rejected meaning that their regression coefficients' equals zero.

To examine how strongly related the independent variables are with the dependent one, it is necessary to look to the unstandardized beta coefficients. When examine them, it is possible to see that lifetime value (CECL) is the strongest related with affective component of the co-creation (CCA) $\beta_1 = 0.467$ followed by knowledge value (CECK) with a $\beta_4 = 0.205$.

		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics		Adjusted R Square
		B	Std. Error	Beta			TOL	VIF	
(constant)		0.574	0.240	-	2.389	0.018	-	-	
Consumer Engagement	**Lifetime value (CECL)**	0.515	0.070	**0.467**	7.335	**0.000**	0.699	1.431	
	Influence value (CECI)	0.102	0.088	0.085	1.161	0.247	0.523	1.912	**36.40%**
	Referral value (CECR)	0.012	0.060	0.013	0.202	0.840	0.738	1.355	
	Knowledge value (CECK)	0.181	0.059	**0.205**	3.059	**0.003**	0.632	1.583	

TABLE 72: COEFFICIENTS TABLE OF CONSUMER ENGAGEMENT ON AFFECTIVE RESPONSE

Source – Own elaboration based on SPSS results

6.6. Mediation Analysis

In this part of the analysis, it will be tested if there a mediator variable is need between the independent variables and the dependent one. The independent variables of the study were: in-flight characteristics, customer-to-customer interaction, brand experience and brand love. Meanwhile, the dependent variable was co-creation and the mediator in the study is consumer engagement. What is going to be discussed is engagement performs as a mediator between the relation of the previously mentioned independent variables and co-creation.

First of all, correlations analysis need to be conducted to ensure that the variables are related among themselves (if there is multicollinearity) because in cases there is not, it is not possible to conduct mediation analysis. To do so, the person coefficient's analysis was performed (consult appendix D, tables named correlations) and in cases that the relation between each pair of variables is statistically significant, meaning that it is lower or equal to the chosen significance value (α= 0.05). It will be used the same significance value, in parallel with the previous analysis.

In this analysis, it was studied all the possible combinations between engagement antecedents and outcomes (which mean that all dimensions of each antecedent were tested with every dimension of engagement and each dimension of co-creation which gave a total of 350 regressions – 25 regressions per each antecedent). There were 14 engagement antecedents, 4 different types of engagement and 5 types of co-creation of value plus one more regression per antecedent that represents the direct path between the antecedent and the dimension of co-creation. To synthesis, the following models were tested

$$Model\ 1 - Direct\ path\ (from\ antecedent\ to\ co - creation)$$

$$\widehat{Y} = \beta_0 + \beta_1 * X_i + \varepsilon \quad \text{(VI)}$$

$$X_i = AAQ, AT, AF, AOL, ACP, AC, AO, AN, C2C, BES, BEA, BEI, BEB, BL$$

$$\hat{Y} = CCM, CCC, CCCon, CCR, CCA$$

$$Model\ 2 - Engagement\ as\ mediator$$

$$\widehat{Y} = \beta_0 + \beta_1 * X_i + \beta_2 * Z_i + \varepsilon \quad \text{(VII)}$$

$$X_i = AAQ, AT, AF, AOL, ACP, AC, AO, AN, C2C, BES, BEA, BEI, BEB, BL$$

$$Z_i = CECR, CECK, CECI, CECL$$

$$\hat{Y} = CCM, CCC, CCCon, CCR, CCA$$

There will be presented only the results that show that engagement is a mediator of the relation between the predictor (proposed engagement antecedents) and the outcome (co-creation).

By looking for the correlations table (appendix D, tables named correlations), it is possible to conclude that in each different analysis, all of the relationship between variables are statistically significant (p-value is lower or equal to 0.05).

To study if there is the existence of a mediator, in this case engagement, it will be tested if this variable control the significance of the model. In this case, simple and multilinear regression analysis is conducted. A simple regression is conducted for the analysis the direct path between one of the proposed engagement antecedents to one dimension of co-creation (consult appendix D, tables with only two variables). A multilinear regression analysis is executed between one of the engagement antecedent, one dimension of engagement and one dimension of co-creation (consult appendix D, tables with 3 variables).

To be in a presence of a mediator effect, after conducting correlations analysis, it is necessary that the model is statistically significant (Sig. of ANOVA test table needs to be lower or equal to 0.05, consult appendix D tables named ANOVA). In addition, it is also necessary that the standardized beta of the coefficients test table (table available in appendix D named coefficients) of the direct path – proposed engagement antecedent to co-creation, to be quite high and significant (sig.≤ 0.05).

Consumer engagement will perform as mediator when, the multiple regression exhibits that the sig of ANOVA (model fit) is statistically significant meaning it is lower or equal to

0.05, and also the sig of the coefficient between the antecedent and engagement is statistically insignificant (sig > 0.05) and that that the sig between engagement and co-creation is statistically significant (sig.≤ 0.05).

Engagement performs as mediator if after adding it to the original regression, the standardized beta (of engagement's antecedent) is no longer significant (meaning it has to be higher than 0.05) (Consult table in appendix D that sum up all the mediators effect that were verified).

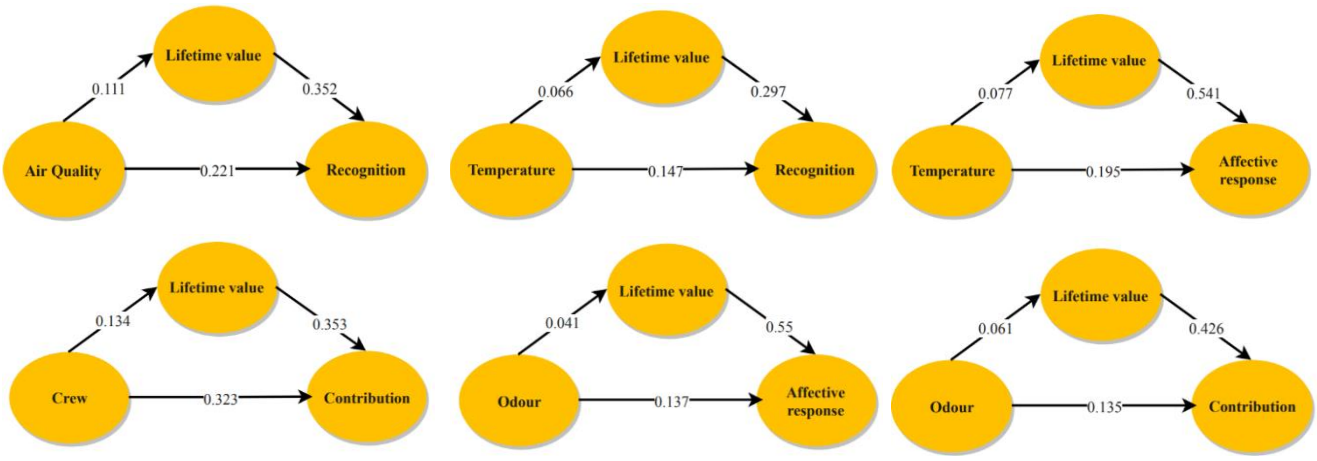
Taking as example the regression of Air quality (AAQ) and Recognition (CCR). From the table sum up (in appendix D), one can see that the Pearson coefficient was verified (which means that there are correlations between air quality, lifetime value and recognition) and, consequently, the analysis can be conducted. Afterwards, when analysing ANOVA test table (appendix D, path 1, table named ANOVA), the test is statistically significant meaning that it is possible to go along with the analysis. Then, examining the sig. and standardized beta of the single regression AAQ-CCR (appendix D, path 1, table coefficients test table), one can see that air quality is statistically significant (sig. = 0.001)

When adding the effect of engagement to this relationship, for example (consult appendix D, path 2, table ANOVA), one can see that the model is statistically significant (sig.=0.000). Afterwards, by looking for coefficients test table (consult appendix D, path 2, table coefficients test table), it is possible to see that the sig. of air quality (AAQ) and lifetime value (CECL) is statistically insignificant (sig.=0.089). At the same time, the sig. between lifetime value (CECL) and recognition (CCR) is statistically significant (sig.=0.00) meaning that lifetime value (CECL) controls the significance of the model and therefore, is a mediator.

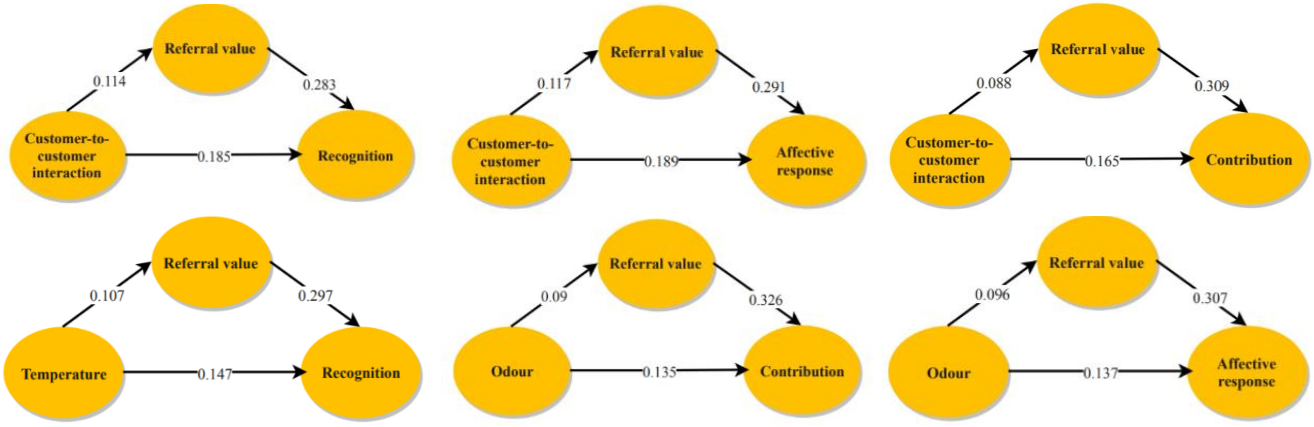
As it is possible to see from the previous example, the sig. of the original regression passes from statistically significant for statistically non-significant (in cases that the correlations have been previously verified) and, it means that we are in the presence of a mediator.

Then, if the same reasoning is done to all of other hypothesis, the regressions that engagement performs as a mediator are the following (the graphic design is to be easier understandable and has on there the values of the standardized betas of each connection)

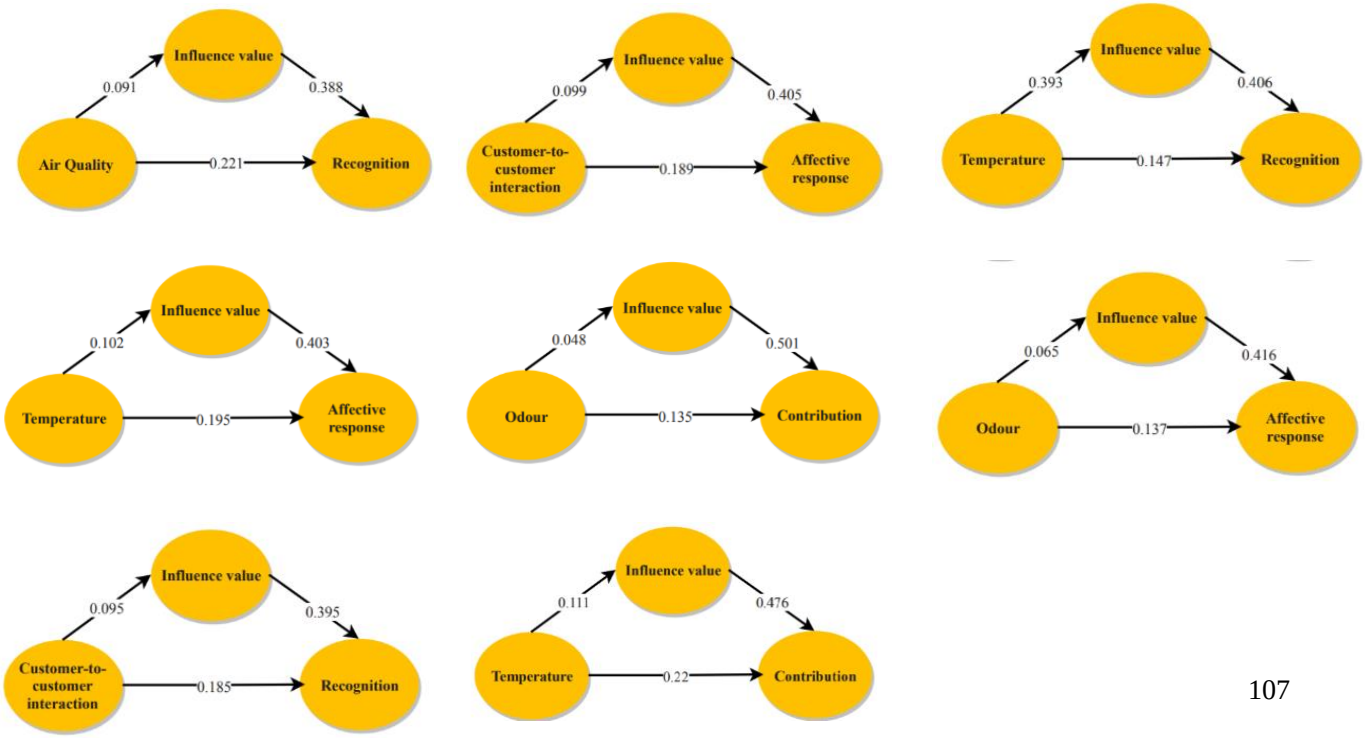
∝ Lifetime value (CECL) as a mediator



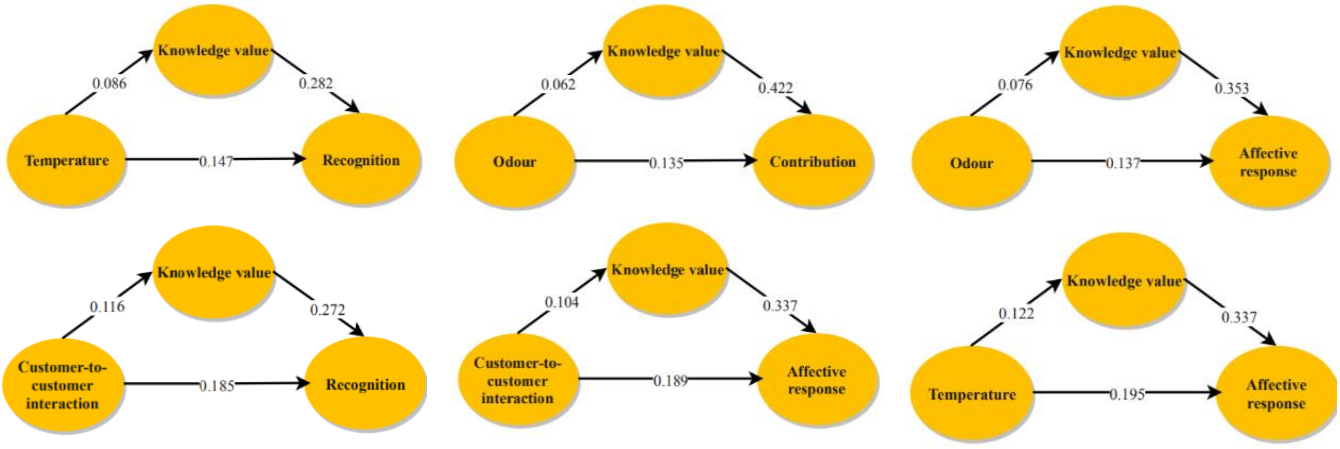
∝ Referral value (CECR) as mediator



∝ Influence value (CECI)as mediato



∝ Knowledge value as mediator



Note that some regressions were not exhibited as a result of two possibilities: there is no relation between the proposed engagement antecedent and outcome (pearson coefficient is not statistically significant), or it was not verified that the sig. and standardized beta of the original independent variable change dramatically (meaning that the variable should turn statistically non-significant).

It is possible to conclude that engagement does a great job in mediating the relationship between the majority of in-flight conditions (such as air quality (AAQ), temperature (AT), odour (AO) and crew (AC)) and also on customer-to-customer interaction (C2C). However, when it comes to brand experience (BES, BEA, BEI, BEB) and brand love (BL), engagement does not mediate the relationship or it were exhibited a relationship between these antecedents and co-creation.

There is other aspect that could be retrieved from this analysis which is that meaningfulness (CCM, co-creation meaningfulness) and collaboration (CCC, co-creation collaboration) are not mediated by engagement or there is not a relationship between the proposed antecedents and this outcome.

6.7. Independent Sample T-Test Analysis

In order to analyze if there are any differences between the two groups of flight passengers that use low cost and flag carriers regarding their average evaluation of each variable, the parametric tests independent samples t-test was conducted. However, before conducting them, it is necessary to confirm if all assumptions that this test requires are meet or not. It is possible to verify which are the assumptions above.

Assumptions of the independent t-test

1. Test variable is measured on an interval scale since the answers of the questionnaire should be answered regarding a likert-scale which, therefore, could be treated as an interval scale (Jamieson, 2004)
2. Samples are independent since they represent opinion from the different persons that fulfilled the questionnaire once and are distinctive from each other
3. The variable is normally distributed accordingly to the central limit theorem that postulates that data (when samples are higher than 30, which it is in this case (n=225)) approximately follows a normal distribution.

Analysis of the test

After confirming that all assumptions hold, the significance level of a=0.05 was chosen (0.05 is the general convention for studies (Sarsdet and Mooi, 2004). All the results will be valid in comparison with the significance level as it is going to be discussed above.

Regarding independent samples test's table, available in appendix D one can see that the results are composed by two tests – one assumes equality of variances and other that there are differences between them. For choosing one of the rows of the table, it is necessary to initial conclude whether the variances are equal or not.

To facilitate the comprehension of the test, the following table was build which has the results of the levene's test and accordingly with that results the respective sig. for t-test analysis (as it is going to be explained above).

		Mean (Population)		Levene's test for equality of variances		Hypothesis H0: $\sigma_1^2 = \sigma_2^2$ H1: $\sigma_1^2 \neq \sigma_2^2$	T-test for equality of means			Hypothesis : H0: $\mu_1 = \mu_2$ H1: $\mu_1 \neq \mu_2$
Second-order construct	**First order construct**	**Flag Carrier**	**Low Cost**	**sig. (2-tailed)**	**a**	***Conclusion**	**t**	**Sig. (2-tailed)**	**a**	***Conclusion**
In-flight characteristics	Air Quality	3.8981	3.4939	0.15	0.05	do not reject Ho	-5.499	0	0.05	reject H0
	Temperature	3.8472	3.5864	0.065	0.05	do not reject Ho	-2.614	0.01	0.05	reject H0
	Food	2.3935	2.4364	0.165	0.05	do not reject Ho	0.289	0.773	0.05	do not reject H0
	Classes on the plane	2.4495	3.3682	0.141	0.05	do not reject Ho	6.329	0	0.05	reject H0
	Overall layout	3.7431	2.9364	0.772	0.05	do not reject Ho	-5.955	0	0.05	reject H0
	Crew	4.0986	3.8955	0.287	0.05	do not reject Ho	-1.757	0.08	0.05	do not reject H0
	Odour	4.0123	3.7424	0.891	0.05	do not reject Ho	-3.206	0.002	0.05	reject H0
	Noise	3.945	3.4045	0.011	0.05	reject H0	-4.783	0	0.05	reject H0
Brand Experience	Sensory	3.5199	3.0636	0.14	0.05	do not reject Ho	-4.091	0	0.05	reject H0
	Affective	3.2783	2.6182	0.143	0.05	do not reject Ho	-5.707	0	0.05	reject H0
	Behavioural	2.9602	2.6515	0.072	0.05	do not reject Ho	-3.02	0.003	0.05	reject H0
	Intellectual	2.948	2.603	0.34	0.05	do not reject Ho	-3.681	0	0.05	reject H0
-	Brand Love	3.0049	2.542	0.026	0.05	reject H0	-4.356	0	0.05	reject H0
-	Customer-to-customer interaction	2.344	2.2341	0.258	0.05	do not reject Ho	-1.063	0.289	0.05	do not reject H0
Consumer engagement	Lifetime value	3.6193	3.4773	0.201	0.05	do not reject Ho	-1.19	0.235	0.05	do not reject H0
	Referral value	2.8532	3.0364	0.083	0.05	do not reject Ho	1.343	0.181	0.05	do not reject H0
	Influence value	2.9656	2.6318	0.13	0.05	do not reject Ho	-3.069	0.002	0.05	reject H0
	Knowledge value	2.9954	2.6682	0.01	0.05	reject H0	-2.185	0.03	0.05	reject H0
Co-creation	Meaningfulness	2.8569	2.4309	0.007	0.05	reject H0	-3.721	0	0.05	reject H0
	Collaboration	3.2844	2.8127	0.039	0.05	reject H0	-4.449	0	0.05	reject H0
	Contribution	3.3028	2.8036	0.471	0.05	do not reject Ho	-4.367	0	0.05	reject H0
	Recognition	3.2352	2.8309	0.732	0.05	do not reject Ho	-3.116	0.002	0.05	reject H0
	Affective response	3.4954	2.9891	0.078	0.05	do not reject Ho	-3.921	0	0.05	reject H0

*if sig =< a - reject H0
sig > a - do not reject H0

Legend
Green : Do not reject H0
Red: Reject H0

TABLE 73: INDEPENDENT SAMPLE T-TEST

Source – Own elaboration based on SPSS outputs

Examining Levene's test for equality of variances, it is possible to confirm if the variances are not equal in the two groups (if for instances p-value (sig.) is lower or equal to the chosen significance level) as it happens with Noise (AN), Brand Love (BL), Knowledge value (CECK), Meaningfulness (CCM) and Collaboration (CCC) or if the variances are equal (if the sig>a as it happens with all other variables and the null hypothesis is not rejected) (highlighted in the table 73, in the first conclusion's column with red and green, respectively).

Afterwards, it is possible to examine the correct row of t-test (consult appendix E) with the independent samples test table) whether the upper or the lower (accordingly if the variances are assumed to be equal or not based on the previous test).

Investigating the significance level a and sig, one can see that on Food (AF), Crew (AC), Customer-to-customer interaction (C2C), lifetime value (CECL) and referral value (CECR) the null hypothesis of equality of means between the two groups is not rejected (since p-value is higher than the significance level). It means that on low cost carrier as in flag carrier, passengers do not feel differences in these items or they do not value the most, in table 72 highlighted with green.

On the other side, Air Quality (AAQ), Temperature (AT), Classes on the plane (ACP), Overall layout (AOL), Odour (AO), Noise (AN), Sensory (BES), Affective (BEA), Intellectual (BEI), Behavioural (BEB), Brand Love (BL), Influence value (CECI), Knowledge value (CECK), Meaningfulness (CCM), Collaboration (CCC), Contribution (CCCon), Recognition (CCR) and Affective response (CCA), the null hypothesis is rejected that postulated that there are differences between the two groups (since p-value is lower or equal to the significance value (a). Then, on these aspects it is visible that there are differences among low cost users versus flag carrier users (highlighted with red colour).

For this it is possible to conclude that the means for the two groups – low cost users versus flag carrier users are quite different.

When studying the means between the two groups that have significant differences (the ones in which the null hypothesis of equality of means was rejected), it is possible to see that in all parameters except Classes on the plane (ACP) (where flag carrier registered a mean of roughly 2,45 and low cost carrier of 3,37 approximately), flag carrier passengers ranked the items with a quite superior mean in comparison to the low cost ones (consult appendix E). However, it was the expected since Classes on the plane (ACP) encompasses items related with the differentiation of classes (item 1: This flight is a single passenger class and item 2: There is no class differentiation in this flight) which are therefore less common things to happen in low cost carriers. On the other side, on flag carriers it is much more usual that passengers have different classes since the size of the plane is normally larger and has enough space to do that differentiation and also to provide a premium experience for business travellers. In low cost carriers, one of the most influential variables is the price (as the name indicates) and the passengers usually want to pay the lowest prices regardless of the type of classes they are going.

In addition, comparing both samples (low cost and flag carrier), the temperature (AT) is the item that registered the lowest difference between them of 0.2608 (absolute value) contrasting with overall layout (AOL) which is the item with the highest mean of 0.8067 (absolute value).

7. Conclusions

7.1. Conclusions and Findings

The purpose of this paper is to identify and analyze the key antecedents of consumer engagement and the main outcome that can emerge from the process. The article emphases the importance of atmospherics conditions, customer-to-customer interaction, brand experience and brand love as main drivers, as well as co-creation as the principal outcome.

As it is known, consumers are no longer acting as passive receptors of the companies' messages, products, rather they are having a role in the process acting like co-producers and co-creators (Chan *et al*., 2010). They want to take part of the process, regardless of which part of the value chain they decide to create value. That is the reason why we should do not only value consumers based on transactions but, rather, based on their overall potential. In this case, consumer engagement was the taken approach that allow companies to improve their performance (Pansari and Kumar, 2017). Moreover, consumer engagement brings benefits for the company but also for the consumer who actively participates in the process (Hollebeek *et al.*, 2017)

	Adjusted R Square			
	In-flight	Brand Experience	C2C interaction	Brand Love
CECL	29.60%	**41.60%**	0.00%	38.00%
CECR	9.10%	**20.60%**	**6.00%**	12.10%
CECI	17.10%	**40.40%**	4.60%	34.10%
CECK	10.40%	**25.80%**	5.80%	20.80%

Legend

In bold – Variable that most contributes for different engagement types

In green – Variable with the highest adjusted R^2

In red – Variables with the lowest adjusted R^2

Bars – Helping in concluding each of dependent variable is mostly related with the independents

	Adjusted R Square
	CE
CCM	**47.70%**
CCC	46.80%
CCCon	32.40%
CCR	**22.20%**
CCA	36.40%

TABLE 74: SYNTHESIS OF THE QUALITY OF THE MODEL EVALUATED BY ITS EXPLANATORY CAPACITY

Source – Own elaboration based on SPSS outputs

This study explains how different elements are connected with each other, in the context of airline companies, following the recommendation of Islam and Rahman (2016) that suggested the study of engagement in unexplored service context such airlines was found, at

least in the papers analysed. The table 74 exhibits a summary with the strength of each independent variable on the dependent ones, in this thesis the dependent are the drivers of engagement (in-flight atmospherics characteristics, customer-to-customer interaction, brand experience and brand love) and, also consumer engagement (when considering the relationship consumer engagement-co-creation of value).

The results shows that **Model 1** of in-flight characteristics have the highest impact on lifetime value (CECL)(adjusted R^2 = 29.60% , F=12.71, p<0.005) and the lowest impact on referral value (CECR) regarding the adjusted R^2 coefficients (Table 74).

Model 2, representing the customer-to-customer interaction was not validated for lifetime value (CECL) but it had been validated **on referral value (CECR)** (adjusted R^2 = 5.80% , F=14.708, p<0.005), **influence value (CECI)** (adjusted R^2 = 4.60% , F=11.842, p<0.005) and **knowledge value (CECK)** (adjusted R^2 = 6% , F=15.374, p<0.005). Customer-to-customer interaction (C2C) is the variable with the lowest impact on different consumer engagement types. It is able to explain only 6% of lifetime value (CECL) per opposition to influence value (CECI) which the model only contributes to explain 4.60% (regarding adjusted R^2).

Model 3 that exhibits the effect of brand experience on consumer engagement that was **validated for lifetime value (CECL)** (adjusted R^2 = 41.60% , F=40.908, p<0.005), **referral value (CECR)** (adjusted R^2 = 20.60% , F=15.494, p<0.005), **influence value (CECI)** (adjusted R^2 = 40.40% , F=38.940, p<0.005) and **knowledge value (CECK)** (adjusted R^2 = 25.80% , F=20.462, p<0.005). In the case of brand experience, it has a strong impact on lifetime value (CECL) and on influence (CECI) with adjusted R^2 coefficients being roughly 41%. It also impacts referrals (CECR) and knowledge (CECK) value but, in this case, the influence is much lower of 20.60 and 25.80 (previously exhibited adjusted R^2 coefficients).

Model 4, aiming to verify the relationship between brand love and consumer engagement was also **validated for lifetime value (CECL)** (adjusted R^2 = 38.00% , F=138.386, p<0.005), **referral value** (CECR) (adjusted R^2 = 18.10% , F=50.623, p<0.005), **influence value** (CECI) (adjusted R^2 = 34.10% , F=117.160, p<0.005) and **knowledge value** (CECK) (adjusted R^2 = 20.80% , F=59.854, p<0.005). Brand Love (BL) contributes to better explain lifetime value (CECL) and influence value (CECI) with adjusted R^2 coefficients being 38% and 34%.

In the case of model 5, the objective was different from the previous ones and that is the reason why it does not explain the different types of engagement. Model 5 demonstrated the effect of engagement on co-creation of value (divided by different types – meaningfulness, collaboration, contribution, recognition and affective response). By examining the model, one can see that it was validated for **meaningfulness (CCM)** (adjusted R^2 = 47.70% , F=52.173, p<0.005), **collaboration (CCC)** (adjusted R^2 = 46.80% , F=50.198, p<0.005), **contribution (CCCon)** (adjusted R^2 = 32.40% , F=27.872, p<0.005), **recognition (CCR)** (adjusted R^2 = 22.22% , F=17.000, p<0.005) and **affective response (CCA)** (adjusted R^2 = 36.40% , F=33.091, p<0.005). Analyzing the impact of engagement on co-creation, it possible to conclude that it contributes a lot to explain the different types of co-creation, specially meaningfulness with an adjusted R^2 of 47.70%.

Independent variable	Dependent variable	Statistically significant explanatory variables
In-flight	CECL	AAQ AC
	CECR	AC
	CECI	AC
	CECK	AOL
Brand Experience	CECL	BES BEA
	CECR	BEB
	CECI	BES BEB
	CECK	BES BEI BEA
Customer-to-customer interaction	CECL	-
	CECR	C2C (the only variable)
	CECI	C2C (the only variable)
	CECK	C2C (the only variable)
Brand Love	CECL	BL (the only variable)
	CECR	BL (the only variable)
	CECI	BL (the only variable)
	CECK	BL (the only variable)
Consumer engagement	CCM	CECL CECI CECK
	CCC	CECL CECI
	CCCon	CECL CECI CECK
	CCR	CECL
	CCA	CECL CECK

TABLE 75: STATISTICALLY SIGNIFICANT EXPLANATORY VARIABLES FOR EACH MODEL

Source – Own elaboration based on SPSS outputs

It is possible conclude, based on the results, that individuals who are engaged have established a strongly connection with the brand (brand love), when creating value, they attempt to recognize the value of that activity for themselves. In addition, individuals also are more willing to work in partnership with the company, to collaborate and to incorporate their resources so that both can achieve more (contribute).

However, not every type of engagement does contribute for the same purpose of co-creation of value. Actually, all consumer engagement types, as well as atmospherics in-flight conditions, are positively related with co-creation of value and consumer engagement, respectively. As a result of it and regarding the results, it is possible to conclude that lifetime value (CECL) contributes for all types of co-creation of value (table 75). Actually, it means that when consumers purchase on a regularly basis the products, their consumers' lifecycle is big enough that lead them to helping the company and also, benefit from the co-creation process. On the other side, consumers' referrals (CECR) value does not impact the co-creation of value. It means that when consumers are incentivized by the company to, for instances, spread the brand messages, purposes, it is not translated in attribution of meaning, a feeling of being working in partnership with the company (collaboration), nor a desire to invest resources in the relationship (contribution), not a feeling of being recognized by others (recognition) and not a "self-enjoyment" (affective response). Regarding consumers' influence value (CECI), it contributes for creating meaning for consumers (meaningfulness), in a feeling of working together with the company (collaboration) and also, in a willingness to invest more resources in that relationship (contribution). This means that when consumers are spreading the message by not being incentivized, voluntary, it results in better results for both parties. Examining the consumers' knowledge value (CECK), the suggestions and feedback consumers provide to firms, contributes for them being involved in the way that perceive the activity as meaningful, it also impacts the contribution, the investment of resources that, in this case are in their majority intellectual/ skills and experiences and also, impacts the entertainment of consumers, the enjoyment.

Since incentivized referrals do not contribute to achieve our objective of co-creation of value, the independent variables that contributes to increase this variable which are: crew (AC), behavioral (BEB), customer-to-customer interactions (C2C) and brand love will not be analyzed with the purpose of directly impact this variable. However, since these variables are

related with the others types of engagement, if it increases, indirectly the referral value will also increase.

Therefore, regarding the table 75, one can see that to potentiate lifetime value (CECL), companies should invest on the air quality (AAQ), crew (AC), regarding the atmospherics in-flight elements, on sensory (BES) and affective (BEA) examining brand experiences and on brand love.

To increase influence value (CECI) consumers do on their networks, companies should work on improving the performance of the crew (AC), provide an atmosphere prone to customer-to-customer interaction, to provide better sensory (BES) and behavioral experiences (BEB) and also on brand love.

Finally, to augment the feedback and suggestions consumers do, the knowledge value (CECK), companies should work on the overall layout, customer-to-customer interaction, on sensory (BES), intellectual (BEI) and affective (BEA) brand experiences and also on brand love.

As a result, the findings about atmospherics conditions are in parallel to what Han and Hwang (2017) and Sasha and Theingi (2009) found that the atmospherics conditions affect consumers' opinions and the feedback given to the company, their influence value and knowledge value (in terms of engagement). Moreover, this examination also shows that crew, the employees, have a huge impact on the consumer engagement, as it was previously discussed on the literature by Rollo and McNeil (2009), Ali and Omar, (2014), Winterm and Chapleo (2017) that employees can impact the service.

Consequently, in order to reduce the investment and maximize the returns in terms of co-creation of value (meaning the variables that impact more than one type of engagement simultaneously, excluding referral value (CECR) because it does not impact co-creation), it should beat an investment in providing sensory experiences (BES) and brand love (BL) since they are the one that impacts lifetime value (CECL), influence value (CECI) and knowledge value (CECK). In addition, also an investment in the crew (AC), creating an ambient prone to customer-to-customer interaction (C2C) and provide affective experiences could be of major importance (as a result of its influence on two types of engagement).

∝ Mediators sum up

Consumer engagement (on the studied dimensions) was found to be a mediator between atmospherics in-flight conditions (namely air quality (AAQ), temperature (AT), odour (AO) and crew (AC)) and also customer-to-customer interaction (C2C). However, in terms of brand experience (BES, BEA, BEI, BEB) and brand love (BL), consumer engagement does not perform as mediator.

Moreover, in that analysis it was possible to see that in any case engagement perform as a mediator when the consequence is meaningfulness (CCM) or collaboration (CCC).

∝ New proposed model

Based on the results of the mediators' analysis, it is proposed a new model of consumer engagement with airlines which is in the figure 5

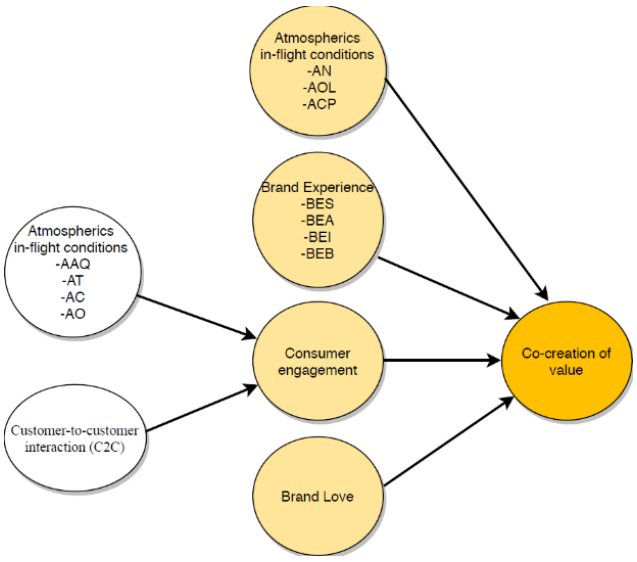


FIGURE 5: NEW PROPOSED MODEL

Source – Own elaboration based on the findings

∝ Independent T-test sum up

When comparing the low cost users against the flag carriers' passengers, it was possible to see that there are significance differences in terms of brand experience (BES: sig=0; BEA: sig=0; BEB: sig=0.003; BEI: sig=0), brand love (BL: sig=0) and co-creation (CCM: sig=0; CCC: sig=0; CCCon: sig= 0; CCR: sig=0.002; CCA: sig=0) in all items. In this case, the

differences indicate that the flag users are strongly satisfied with these variables than the low-cost users.

In terms of atmospherics in-flight conditions, only the food (AF: sig=0.773) and the crew (AC: sig=0.08) registered to have the same level of agreement with the sentences which means that in terms of quantity of food offered (AF1: In this flight there is only drinks and snacks offered and AF2: There is no in-flight food available) and the behavior of the crew (AC1: The staff inside the plane is knowledgeable and helpful in this flight; AC2: The staff inside the plane is courteous and professional in this flight; AC3: There is enough staff in this flight; AC4: The staff demonstrated interest and enthusiasm in this flight). This means that regardless the type of flight the quantity of food in both flights and the way crew acts is expected to be quite similar.

All other items, air quality, temperature, classes on the plane, overall layout, odour and noise were mentioned to exhibit quite differences in both flights. In this case, although Loureiro and Fialho (2016) mentioned that the differences between both type of airlines are getting narrower, in this sample the differences were felt. In opposition to what Rollo and McNeil (2009) defended that consumers up until they have a problem with a comfort factor, they will not identify, in this case, although we do not know if there has been any problem, if passengers perceive differences between both types of airlines, it means that they feel differences, they consciously identify these items.

Customer-to-customer interaction exhibit a similar level of agreement with the sentences regardless the type of airline used which is this case means that in low cost as well as in flag carriers, consumers disagreed that they have valuable contacts (C2C1) from the flight, create formal or informal partnerships with the other passengers (C2CI3), that continue to exchange information with the other passengers (C2CI4), that the price of the flight is less valuable than the people they meet (C2CI5) and that the value received in terms of social network is superior than the costs of the flights (C2CI6) since the mean of all of the items is approximately 2 meaning disagreement.

∝ Descriptive statistics sum up

When analyzing the mean of all items, it can be said that AC3: There is enough staff in the plane is the item that from all registered the highest mean of 4.14 and with a standard deviation of 0.83. On the opposite side, AF2: There is no in-flight food available in this flight is the item with the lowest mean of 2.01 and a standard deviation of 1.71. In this case, this low mean is

positive seems the sentence is in the negative, which means that passengers agree that there is food available in their flights.

Regarding the standard deviation, the item with the lowest value is AAQ1: The air quality in this plane is appropriate of 0.73 meaning that is the sentences which gathers higher level of consensus among the respondents. On the other side, the item that exhibits the highest dispersion of the answers was AF2: There is no in-flight food available in this flight with 1.71.

∝ Answering to the research questions and research objectives

As it was possible to see from the analysis of the regression models all of the studied variables – atmospherics, customer-to-customer interaction, brand experience and brand love influence consumer engagement in its different dimensions. However, there is an exception which customer-to-customer interaction does not influence consumer engagement value. From the results, it was also possible to conclude that engaged consumers are more pro-active in the co-creation process (it is explained by the high levels of the adjusted R^2 models mentioned previously).

This papers results therefore in the identification of four antecedents (from them, brand experience is the driver with the highest impact, see the table 73) and one consequence of consumer engagement which is co-creation of value. There were differences among low cost and flag users, as explained previously. Consumer engagement also performs as a mediator in the previously explored cases.

7.2. Managerial implications

Given that brand experience is the variable that most influences engagement (regarding its adjusted R^2) and, in addition, sensory experiences are the ones able to influence simultaneously three types of engagement (lifetime value, influence value and knowledge value), managers should be able to design effective consumer experiences that triggers consumers senses (whether the eyes, nose, mouth, ears and touch). For instances, creating a stronger brand with a stronger communication, not only inside the plane but, in all consumers' touch-points. Brands, for instances, should invest on inside the plane details that characterize their brand and distinguish them from the competition, provide quality food with different types of meals offers that go along with consumers' lifestyle.

Affective and intellectual experiences were also found to be important in consumer engagement and to attain that brands can for example in each x months launch challenges to consumers to make them thinking about the brand and stimulate their curiosity while, if for instances the consumer win, it can create an emotional connection with the brand.

Moreover, brand love also exhibits to be key on engaging consumers (analyzing its high adjusted R^2) and for consumers to feel in love with the brand, it is necessary to be fun and to be able to emotionally connect with consumers. One avenue in doing so in through their marketing communication messages which can be more fun, more enjoyable and also, to connect technology with the airline. For example, if a consumer has seen a travel for the country x on the website and also, likes to go for a walk by ride, the brand can propose a travel for that country that offers the ride, to personalize offers and create a more emotional connection with passenger.

Then, the atmospherics in-flight, mainly crew also have a huge impact on consumer engagement and, for it, it is important that managers should work on the crew's properly training (including not only technical instructions but also behavioral components – so that they would be prepared to face the consumer and approach them in a friendly way).

Of course, brands beyond working on their brand messages, should also be prepared to do active listening to see whether there is a problem that can be transformed in an opportunity.

Finally, it was demonstrated that consumer engagement should be a measure of evaluating consumers rather than, only their monetary value, because it can lead to co-created value, giving precious insights to the strategic decisions of the company.

7.3 Theoretical contributions

Provide a holistic perspective of consumer engagement with airline company's in terms of what most drives and the result of it which allows managers to take decisions about which of the following variables to invest on and maximize their return.

7.3. Limitations and further research

The following paper presents some limitations namely in terms of temporal window since the surveys were gathered only once and, for it, it is not able to show the different variations in engagement that the same passenger could have as the time passes. This can be a way of further research to study the consumer engagement adding the temporal effect. As it was also suggested by Kumar and Pansari (2016), to study time-varying effect.

Moreover, also the dimension of the sample that, although it is possible to draw conclusions, if the size of the sample is greater, it would give more reliable conclusions. It is also a possibility of further research to apply this model to a higher sample and confirm if the results keep the same or not and also, see if it possible to divide the sample in clusters to analyze different types of consumer engagement – highly engaged, engaged and others.

In this thesis, the sample was gathered only in Lisbon area meaning that it is composed by Portuguese and other people from other locations that visits Lisbon. This means that some nationalities could be not represented which does not allow to make for instances comparisons between countries, between groups of countries in different continents and see if the culture, for instances, influences the level of engagement. Therefore, studying the different levels of engagement in different cultures could be an avenue for further research.

There is also other limitation of the study which is that consumer engagement was only studied on its positively valence that benefits the company. However, consumer can be negatively engaged or disengaged with the company (Hollebeek and Chen, 2014a). Other possibility of further research would be to provide a new scale for consumer engagement that adds to this one some items that could measure the negative engagement/disengagement or developing a new one which measures holistically consumer engagement (in their valences). In addition, to study the differences in the outcomes as a result of negatively engaged consumers as So et al., (2014) recommended.

Finally, the model is based in the view of the consumer meaning that it only considers which variables lead consumers to be engaged with the airline brand and, moreover, it does not include what can firms/companies could do to make consumers engaged with brands. A new model that includes also the companies' perspective could be an avenue for further research.

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9. Appendix

A. General

A.1. Engagement definitions

Author(s)	Concept	Focal subject/Object	Definition
Thakur, R. 2018. Customer engagement and online reviews. ***Journal of retailing and consumer services***, 41: 48-59	Customer engagement	Customer Focal object not defined	*"...A psychological state that leads to frequent interactions with the focal object (mobile shopping apps in this case) that goes beyond transactional motive of immediate purchase intention. The motives for interactions with the focal object may be utilitarian (e.g., looking for new product launch, promotional offers, deals etc. in a specific category) with the objective of information for potential purchase in future or hedonic (e.g., looking for entertainment in new market trends, scenic pictures, etc.) with the objective of keeping oneself abreast of environment..."* (Thakur, 2018: 49)
Storbacka, K., Brodie, R.J., Böhmann, T., Maglio, P.P., & Nenonen, S. 2016. Actor engagement as a microfoundation for value co-creation. ***Journal of business research***, 69:3008-3017	Actor engagement	Actors Activities	*"...both the disposition of actors to engage, and the activity of engaging in an interactive process of resource integration within the institutional context provided by a service ecosystem..." (* Storbacka *et al.,* 2016: 3009*)*

Hollebeek, L.D., Glynn, M.S., Brodie, R.J. 2014. Consumer brand engagement in social media: conceptualization, scale development and validation. **Journal of interactive marketing**, 28: 149-165	Consumer brand engagement in social media	Customer Focal object not defined	*"...A consumer's positively valenced brand-related cognitive, emotional and behavioral activity during or related to focal consumer/brand interactions…."* (Hollebeek *et al.*, 2014: 154)
Eigenraam, A.W., Eelen, J., Lin, A.V., & Verlegh, P.W.J. 2018. A consumer-based taxonomy of digital customer engagement practices. ***Journal of interactive marketing***, 44: 102-121	Digital customer engagement	Customer Focal object not defined	*"...consumers' online, behavioural manifestations of brand engagement that go beyond purchase..." (*Eigenraam *et al.*, 2018:104*)*
Dolan, R., Conduit, J., Fahy, J., & Goodman, S. 2016. Social media engagement behavior: a uses and gratifications perspective. ***Journal of strategic marketing***, 24: 261-277	Social media engagement	Customer Social media	*"...Social media engagement behaviours go beyond transactions, and may be specifically defined as a customer's behavioural manifestations that have a social media focus [adapted], beyond purchase, resulting from motivational drivers..."* (Dolan *et al.*, 2016: 265)
Dessart, L., Veloutsou, C., & Morgan-Thomas, A. 2016. Capturing consumer engagement: duality, dimensionality and measurement. ***Journal of marketing management***, 32: 399-426	Consumer engagement	Consumer Focal object not defined	*"...the state that reflects consumers' individual dispositions toward engagement foci, which are context-specific. Engagement is expressed through varying levels of affective, cognitive, and behavioural manifestations that go beyond exchange situations..."* (Dessart *et al.*, 2016: 409)
Harmeling, C., Carlson, B.D., & Moffett, J. 2016. Toward a theory of customer engagement marketing. Journal of the	Customer engagement	Customer's Focal object not defined	*"...as a customer's voluntary resource contribution to a firm's marketing function, going beyond financial patronage…."*(Harmeling *et al.*, 2016:316)

academy of marketing science, 45: 312-335			
Harmeling, C., Carlson, B.D., & Moffett, J. 2016. Toward a theory of customer engagement marketing. Journal of the academy of marketing science, 45: 312-335	Engagement marketing		*"...Engagement marketing represents the firm's deliberate effort to motivate, empower, and measure a customer's voluntary contribution to its marketing functions, beyond a core, economic transaction (i.e., customer engagement)...."* (Harmeling *et al.*, 2016:312)
Vivek, S.D., Beatty, S.E., Dalela, V., & Morgan, M.R. 2014. A generalized multidimensional scale for measuring customer engagement. ***Journal of marketing theory and practice***, 22: 401-420	Customer engagement	Customer Brand, firm's offerings or activties	*"...the level of customer's (or potential customer's) interactions and connections with the brand or firm's offerings or activities, often involving others in the social network created around the brand/offering/activity…."* (Vivek *et al.*, 2014: 401)
Van Doorn, J., Lemon, K.N., Mittal, V., Nass, S., Pick, D., Pirner, P., & Verhoef, P.C. 2010. Customer engagement behavior: theoretical foundations and research directions. ***Journal of service research***, 13:253-266	Customer engagement behavior	Customers Focal object not defined	*"...The customers' behavioral manifestation toward a brand or firm, beyond purchase, resulting from motivational drivers..."* (Van Doorn *et al.*, 13: 253)
Wu, J., Fan, S., & Zhao, J.L. 2018. Community engagement and online word of mouth: An empirical investigation, 55: 258-270	Consumer engagement in online brand communities	Customer	*"as customer activity types and patterns, specifically their contribution behaviors"* (Wu *et al.*, 2018:259)

A.2. Related concepts definitions

Author	Related constructs	Definition
Moorman *et al.*, 1992	Commitment	Persistent believing that keep going the relationship with the exchange partner is so valuable
Moorman *et al.*, 1993	Trust	Consumer perceive the company as being honest, has confidence on the exchange partner. It reduces the distress of having much choices.
Carvalho and Fernandes, 2018	Involvement	The interest and relevance of an object to the subject (usually the consumer) and a willingness to invest resources with it describes involvement
Calder et al., 2013	Satisfaction	An evolution of the value of the product after experiencing it/using it

A.3. Questionnaire in English

Airlines' Experience survey

This is a questionnaire for a master thesis (master in Marketing, ISCTE-IUL) regarding the experience in-flight.
All the information gathered will be treated confidentially and anonymously and analysed statistically with the rest of the survey in a global way.

- The questionnaire is divided in parts each part is a situation that presents a pair of statements. Regarding that situation place with an "X" the option you agree.
- All the answers should be answered having in mind a specific airline.
- It was drawn up in the way that only takes 5 minutes to answer it.
- Note that there are no correct or wrong answers.

Thank you for your collaboration!

1) **Which is the airline company that you most frequently travelled in the last 3 years?**

_____

Situation: Think about that airline company and the experience you have in-flight and answer the following statements	**Strongly Agree**	**Agree**	**Neutral**	**Disagree**	**Strongly Disagree**
The air quality in this plane is appropriate					
It is easier to breathe in this plane compared to other planes					
The air in this plane is dust-free					
The temperature during the flight is comfortable					
The level of moisture/humidity in this plane is fine					
It is not very cold/hot in this plane					
It is not too dry in this plane					
In this flight there is only drinks and snacks offered					
There is no in-flight food available in this flight					
This flight is a single passenger class					
The seat and tray for eating and reading are comfortable					
The seating layout in this plane is comfortably arranged					
There is no class differentiation in this flight					
Overall, the layout in this plane made it easy for me to move around					

Situation: Staff inside the plane	**Strongly Agree**	**Agree**	**Neutral**	**Disagree**	**Strongly disagree**
The staff is knowledgeable and helpful in this flight					
The staff is courteous and professional in this flight					
There is enough staff in this flight					
The staff demonstrated interest and enthusiasm in this flight					

Situation: Smell/Odor inside one plane of the airline mentioned previously	**Strongly Agree**	**Agree**	**Neutral**	**Disagree**	**Strongly disagree**
The flight odour is not strange/unfamiliar					
The odour during this flight is acceptable					
The odour on this flight is fine					

Situation: In general terms, the flight with that airline	**Strongly Agree**	**Agree**	**Neutral**	**Disagree**	**Strongly disagree**
This airline does not appeal to my senses					
I do not have a strong emotions for this airline					

This airline does not make me think					
I do not get my money's worth when I purchase things from that airline					

Situation: Noise level inside the plane	**Strongly Agree**	**Agree**	**Neutral**	**Disagree**	**Strongly disagree**
The noise level of this plane is acceptable					
The aircraft noise during this flight is not too loud/bothersome					

Situation: During the flight from that airline …	**Strongly Agree**	**Agree**	**Neutral**	**Disagree**	**Strongly Disagree**
I continue to exchange valuable information, ask/answer questions, etc. with other flight passengers that I met at the flight					
I have many new valuable contacts in the flight					
I have little attachment to the other passengers in this flight					
I have valuable formal/informal partnerships with some of the passengers I meet at that flight					
More than the number of contacts I made at the flight, the most important value of networking is provided through one or two critical contacts					
Overall, the value I receive and expect to receive from networking is alone worth the costs of the flight					

Situation: Please place your opinion regarding the following statements	**Strongly Agree**	**Agree**	**Neutral**	**Disagree**	**Strongly Disagree**
This airline makes a strong impression on my visual sense or other senses					
I find this airline interesting in a sensory way					
This airline induces feelings and sentiments					
This airline brand is an emotional brand					
I engage in physical actions and behaviors when I use this airline					
This airline results in bodily experiences					
This airline is not action oriented					
I engage a lot of thinking when I encounter this airline					
This airline brand stimulates my curiosity and problem solving					
I will continue buying products/services of that airline in the near future					
My purchases with that airline make me content					
Owning the products/services of this airline makes me happy					
I promote this airline because of the monetary referral benefits provided by the brand					
In addition to the value derived from the product, the monetary referral incentives also encourage me to refer this airline to my friends and relatives					
I enjoy referring this airline, I refer to my friends and relatives because of the monetary referral incentives					
Given that I use this airline, I refer my friends and relatives to this brand because of the monetary referral incentives					
I do not actively discuss this airline brand on any media					
I love talking about my brand experience					
I discuss the benefits that I get from this airline with others					
I am a part of this airline and mention it in my conversations					
I provide feedback about my experiences with the airline to the firm					

I provide suggestions/feedback for improving the performance of the airline					
I provide suggestions/feedback about new products/services of that airline					
I provide feedback/suggestions for developing new products/services for this airline					

What is your opinion regarding the following statements about the airline company?	**Very much**	**Yes**	**Modera-tely**	**No**	**Not at all**
Flying with this airline says something "true" and "deep" about whom you are as a person					
Is this airline able to make you look like you want to look?					
Is this airline able to do something that makes your life more meaningful?					
Do you ... find yourself thinking about that airline?					
Are you willing to spend a lot of money improving and fine-turning a product from this airline after you buy it?					
Do you feel yourself... desiring to flight with that airline?					
Have you…Interacted with that airline in the past?					
Do you feel there is a natural "fit" between you and that airline					
Do you feel emotionally connected to this airline?					
To what extent do you feel that this airline … is fun?					
Please express the extent to which... Believe that you will be travelling with this airline company for a long time?					
Suppose that airline is no longer available for travelling, to what extent would you feel …Anxiety					

	1	2	3	4	5
On the following scales, please express your overall feelings and evaluations towards that airline …. 1- Negative to 5-Positive					

Situation: You and the airline have co-created value. Co-creation of value could be before, during and after the flight. Examples of co-creation of value include: -During the flight you helped the flight attendee or call her/his attention for something that is wrong (for example: the bag of other passenger will fall,..) -After the flight, you shared your opinion of that in-flight experience in websites related to the company to help the company to improve its services	**Strongly Agree**	**Agree**	**Neutral**	**Disagree**	**Strongly Disagree**
It is meaningful					
This is important to me					
The time I spend on it is worthwhile					
It is valuable to me					
My effort is worthwhile					
We are a team					
We create it together					
We are working together					
We cooperate with each other					
We collaborate on the project					
I share my knowledge					
I contribute my skills to this					
I contribute my experience to this					

I invest my resources					
I make a personal investment in this					
I receive credit for this					
Our results are recognized					
Others recognize the outcome					
Others recognize me for this					
We achieve mutual benefits					
This is fun					
This is entertaining					
This is enjoyable					
This is interesting					
It is exciting					

2) Do you consider that this airline has all the technologies equipment for a user?

☐ Yes ☐ No

3) Is there any other information about the airline that you would like to share?

_____

_____

Gender

☐ Male ☐ Female

Age

☐ 16 to 20 years ☐ 31 to 40 years ☐ 51 to 60 years

☐ 21 to 30 years ☐ 41 to 50 years ☐ More than 60 years

Education Level

☐ High School or less ☐ Graduate degree (Master/ PhD)

☐ Bachelor's degree ☐ No response

Occupation:

_____

_____

Nationality:

_____

_____

Thank you,

Inês Moura

QUESTIONÁRIO SOBRE A EXPERIÊNCIA DE VOO

Este questionário é para uma tese de mestrado (mestrado em Marketing, ISCTE-IUL) sobre a experiência dentro de um avião.

Toda a informação recolhida será tratada de forma confidencial e anónima e analisada de forma estatística em conjunto com os restantes questionários recolhidos.

- O questionário está dividido em partes, cada parte é uma situação que apresenta um conjunto de frases relacionadas com a mesma. Tendo em conta essa situação, por favor, assinale com um "X" a resposta com a qual concorda.
- Todas as respostas devem ser respondidas tendo em mente uma companhia aérea específica
- O questionário foi desenhado para demorar apenas 5 minutos a responder
- Não há respostas corretas ou erradas

Muito obrigada pela sua colaboração!

2) Qual foi a companhia aérea que mais frequentemente viajou nos últimos 3 anos?

_____

Situação: Pense sobre essa companhia aérea e uma experiência que teve dentro do avião e responda, por favor, às seguintes afirmações	Concorda fortemente	Concorda	Neutro	Discorda	Discorda fortemente
A qualidade do ar no avião é apropriada.					
É mais fácil respirar neste avião em comparação a outros aviões.					
O ar deste avião é livre de poeiras.					
A temperatura durante o voo é confortável.					
O nível de humidade no avião é aceitável.					
Não está muito frio/calor dentro do avião.					
Este avião não está muito seco.					
Neste voo apenas foram oferecidas bebidas e snacks.					
Não há comida dentro do voo disponível.					
Este voo é de classe económica.					
O banco e a bancada para comer são confortáveis.					
O layout dos bancos neste avião está organizado de forma confortável.					
Não há diferenciação de classes neste avião.					
No geral, o layout deste avião permite-me circular facilmente.					

Situação: O Staff dentro do voo	Concorda fortemente	Concorda	Neutro	Discorda	Discorda fortemente
O staff é experiente e disponível para ajudar neste voo.					
O staff, neste voo, é cortês e profissional.					
Há staff suficiente durante o voo.					
O staff demonstrou interesse e entusiasmo durante o voo.					

Situação: Cheiro/Odor dentro do avião/voo com a companhia aérea mencionada anteriormente	Concorda fortemente	Concorda	Neutro	Discorda	Discorda fortemente
O cheiro dentro do avião não é estranho/ pouco familiar.					
O cheiro durante o voo é aceitável.					
O cheiro dentro do avião é bom.					

Situação: O nível de ruído dentro do voo	Concorda fortemente	Concorda	Neutro	Discorda	Discorda fortemente
O nível de ruído do avião é aceitável.					

O ruído causado pelo próprio avião durante o voo não é incomodativo.					

Situação: Em termos gerais, o seu voo na companhia aérea mencionada	Concorda fortemente	Concorda	Neutro	Discorda	Discorda fortemente
Esta companhia aérea não é apelativa para os meus sentidos.					
Não tenho uma emoção forte por esta companhia aérea.					
Esta companhia aérea não me faz pensar.					
Eu não ganho o valor do meu dinheiro quando compro coisas destas companhia aérea.					

Situação: Durante um voo com companhia aérea que mencionou acima	**Concorda fortemente**	**Concorda**	**Neutro**	**Discorda**	**Discorda fortemente**
Continuo a trocar informação valiosa, fazer/responder a perguntas, etc. com outros passageiros que conheci no voo.					
Tenho muitos novos contactos e de grande valor do voo.					
Tenho uma fraca conexão aos outros passageiros do meu voo.					
Tenho parcerias formais/informais com alguns dos passageiros que conheci no meu voo.					
Mais do que o número de contactos que fiz no voo, o valor mais importante da rede de contactos é feita através de 1 ou 2 contatos críticos.					
No geral, o valor que recebi e espero receber da rede de contactos por si só ultrapassa os custos deste voo.					

Por favor coloque a sua opinião tendo em conta as seguintes afirmações	Concorda fortemente	Concorda	Neutro	Discorda	Discorda fortemente
Esta companhia aérea causa um grande impato nos meus sentidos visuais ou noutros sentidos.					
Esta companhia aérea é interessante em termos sensoriais.					
Esta companhia aérea induz-me sentimentos.					
A marca desta companhia aérea é emocional.					
Empenho-me em ações físicas e comportamentos quando uso esta companhia aérea.					
Esta companhia aérea despoleta-me experiências corporais.					
Esta companhia aérea não é orientada para a ação.					
Quando me deparo com esta companhia aérea penso muito.					
Esta companhia aérea estimula a minha curiosidade e capacidade de resolver problemas.					
Num futuro próximo, irei continuar a comprar os produtos/serviços desta companhia aérea.					
As minhas aquisições com esta companhia aérea deixam-me satisfeito.					
Possuir produtos/serviços desta companhia aérea deixa-me feliz.					
Divulgo esta companhia aérea por causa dos benefícios monetários fornecidos pela marca.					
Para além dos benefícios retirados do produto, os benefícios monetários recebidos pela referência também me encorajam a referir esta companhia aérea aos meus amigos e parentes.					
Gosto de referir esta companhia aérea, menciono-a aos meus amigos e parentes por causa do benefício monetário recebido quando a menciono.					
Tendo em conta que utilizo esta companhia aérea, refiro os meus amigos e parentes à marca por causa dos benefícios monetários.					

Não discuto esta marca ativamente em nenhum dos media.					
Adoro falar sobre a experiência que a marca me proporcionou.					
Discuto os benefícios que tiro da experiência com os outros.					
Sou parte desta companhia aérea e menciono-a nas minhas conversas.					
Dou feedback sobre as minhas experiências com a companhia aérea à mesma.					
Dou sugestões de forma a melhorar a performance desta companhia aérea.					
Dou sugestões/feedback sobre novos produtos e serviços desta companhia aérea.					
Dou sugestões/feedback para desenvolver novos produtos e serviços para esta companhia.					

Assinale a sua opinião sobre da companhia aérea	Definitivamente sim	Sim	Moderadamente	Não	Definitivamente não
Voar com esta companhia aérea afirma algo verdadeiro e profundo sobre aquilo que sou enquanto pessoa					
Esta companhia aérea permite-lhe mostrar-se como pretende?					
Esta companhia aérea é capaz de fazer algo que torna a sua vida com maior significado?					
Dá por si a pensar nesta companhia aérea?					
Está disposto a gastar mais dinheiro a melhorar e a transformar um produto desta companhia aérea depois de adquiri-lo?					
Dá por si a querer viajar com esta companhia aérea?					
Interagiu com esta companhia aérea no passado?					
Sente que existe uma conexão natural entre si a companhia aérea?					
Sente-se emocionalmente conectado a esta companhia aérea?					
Sente que esta companhia aérea é divertida?					
Acredita que irá viajar com esta companhia aérea por muitos anos?					
Suponha que esta companhia aérea não está mais disponível, acha que ia sentir um certo nível de ansiedade?					

Situação: Pense numa situação onde co-criou valor com a companhia aérea Exemplos de situações de co-criação de valor incluem as interacções antes, durante e após o voo. -Durante o voo imagine que chamou a atenção de um tripulante porque uma mala de outro passageiro podia cair do compartimento -Depois do voo, por exemplo, partilha a sua experiência com aquela companhia aérea em redes sociais relacionadas com a mesma, no website da companhia	Concorda fortemente	Concorda	Neutro	Discorda	Discorda fortemente
Tem significado					
É importante para mim					
O tempo que dispensei valeu a pena					
É valioso para mim					

O meu esforço valeu a pena					
Nós somos uma equipa					
Nós criamos juntos					
Nós trabalhamos juntos					
Nós cooperamos um com o outro					
Nós colaboramos no projeto					
Partilhei o meu conhecimento					
Contribui com as minhas capacidades para isto					
Contribui com a minha experiência para isto					
Investi os meus recursos					
Fiz um investimento pessoal nisto					
Recebi crédito por tê-lo feito					
Os nossos resultados são reconhecidos					
Os outros reconhecem o resultado					
Os outros reconhecem-me por isto					
Atingimos benefícios mútuos					
Isto é divertido					
Isto entretém-me					
Isto é agradável					
Isto é interessante					
Isto é excitante					

Numa escala de 1 a 5 onde 1-muito negativos e 5-muito positivos	**1**	**2**	**3**	**4**	**5**
Expresse os seus sentimentos e avaliações relativos à companhia aérea…					

2) Considera que a companhia aérea tem todos os equipamentos considerados bons para um utilizador?

☐ Sim ☐ Não

3) Mais alguma informação que gostasse de partilhar

_____

_____

Género

☐ Masculino ☐ Feminino

Idade

☐ 16 a 20 anos
☐ 21 a 30 anos
☐ 31 a 40 anos
☐ 41 a 50 anos
☐ 51 a 60 anos
☐ Mais de 60 anos

Nível Educacional

☐ Ensino Secundário ou inferior ☐ Licenciatura ☐ Mestrado/Doutoramento ☐ Não responde

Ocupação:

_____

Nacionalidade:

_____

Obrigada,

Inês Moura

A.4. List with the constructs, items and definition

Construct	Definition	Measured items	Adapted from
In-flight characteristics • Air Quality • Temperature • Odour • Noise • Food • Crew	The environment surrounding in which the service is served (Dedeoğlu *et al.*, 2015)	**Air Quality** • The air quality in this plane is appropriate • It is easier to breathe in this plane compared to other planes • The air in this plane is dust-free **Temperature** • The temperature during the flight is comfortable • The level of moisture/humidity in this plane is fine • It is not very cold/hot in this plane • It is not too dry in this plane **Food** • In this flight there is only drinks and snacks offered • There is no in-flight food available in this flight **Layout** • This flight is a single passenger class • The seat and tray for eating and reading are comfortable • The seating layout in this plane in comfortably arranged • There is no class differentiation in this flight • Overall, the layout in this plane made it easy for me to move around Note that: (The 1st and the 4th item in this thesis formed one dimension (Classes on the plane) and the other items formed other dimension (Overall layout) **Crew** • The staff inside the plane Is knowledgeable and helpful in this flight • The staff inside the plane Is courteous and professional in this flight	Dedeoğlu, B.B., Küçükergin, K.G. & Balıkçıoğlu, S. 2015. Understanding the relationships of servicescape, value, image, pleasure, and behavioural intentions among hotel customers. ***Journal of travel and tourism marketing***, 32: S42-S61 Loureiro, S.M.C., & Fialho, A.F. 2016. The role of intrinsic in-flight cues in relationship quality and behavioral intentions: segmentation in less

		• The staff inside the plane There is enough staff in this flight • The staff inside the plane Demonstrated interest and enthusiasm in this flight **Odour** • The flight odour is not strange/unfamiliar • The odour during this flight is acceptable • The odour on this flight is fine **Noise Level** • The noise level of this plane is acceptable • The aircraft noise during the flight is not too loud/bothersome (Loureiro and Fialho, 2016)	mindful and mindful passengers. ***Journal of travel and Tourism management***, 34:948-962
Customer-to-customer interaction	Customer-to-customer interactions: interactions between customers that have an impact on company's offerings (Fakharyan *et al.*, 2014; Gruen *et al.*, 2007)	• I have many new valuable contacts in the flight • I have little attachment to other passengers in that flight (REVERSED) • I have valuable formal/informal partnerships with some of the passengers I met at that flight • I continue to exchange valuable information, ask/answer questions, etc. with other flight passengers that I met at the flight • More than the number of contacts I made at the flight, the most important value of networking is provided through one or two critical contacts • Overall, the value I received and expect to receive from networking is alone worth the costs of the flight (Gruen *et al.*, 2007)	Fakharyan, M., Omidvar, S., Khodadalian, M.R., Javilvand, M.R., & Vosta, L.N. 2014. Examining the effect of customer-to-customer interactions on satisfaction, loyalty, and word-of-mouth behaviors in hospitality industry: the mediating role of personal interaction quality and service atmospherics.

			Journal of travel and tourism marketing, 31: 610-626 Gruen, T.W., Osmonbekov, T., & Czaplewski, A.J. 2007. Customer-to-customer exchange: its MOA antecedents and its impact on value creation an loyalty. ***Journal of academic marketing science***, 35: 537-549
Brand Experience	Brand Experience: *"..Subjective consumer responses that are evoked by specific brand-related experiential attributes…"* (Brakus *et al.*, 2009: 53) • Sensory: Predict future design and aesthetics perceptions and usages (Brakus *et al.*, 2009:66)	**Sensory** • This airline does not appeal to my senses (REVERSED) • This airline makes a strong impression on my visual sense or other senses • I find the airline interesting in a sensory way **Affective** • I do not have strong emotions for this airline (REVERSED) • This airline induces feelings and sentiments • This airline brand is an emotional brand **Behavioural**	Brakus, J.J., Schmitt, B.H., Zarantonello, L. 2009. Brand Experience: What is it? How is it measured? Does it affect loyalty?. ***Journal of Marketing***, 73: 52-68

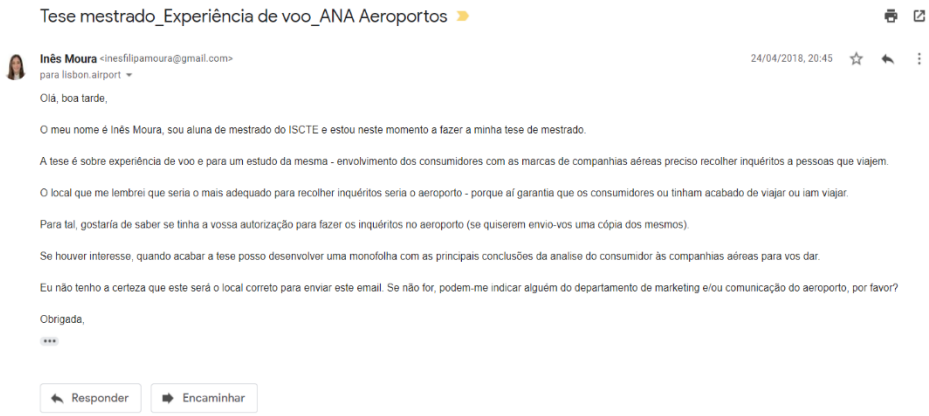
	• Affective: Predict emotional judgments (Brakus *et al*., 2009:66) • Behavioural: Specific actions and physiological reactions when interacting with the brand (Brakus *et al.*, 2009:66) • Intellectual: Predict creative usages of the brand (Brakus *et al*., 2009: 66)	• I engage in physical actions and behaviors when I use this airline • This airline results in bodily experiences • This airline is not action oriented (REVERSED) **Intellectual** • This airline does not make me think (REVERSED) • I engage a lot of thinking when I encounter this airline • This airline brand stimulates my curiosity and problem solving (Brakus *et al.*, 2009)	
Brand Love	*"…A passionate emotional attachment a satisfied consumer has for a particular trade name…"* (Carroll and Ahuvia, 2006:81)	• Flying with this airline says something "true" and "deep" about whom you are as a person • Is this airline able to make you look like you want to look • Is this airline able to do something that makes your life more meaningful? • Do you find yourself thinking about that airline? • Are you willing to spend a lot of money improving and fine-turning a product from this airline after you buy it? • Do you feel yourself desiring to flight with that airline? • Have you interacted with that airline in the past? • Do you feel that there is a natural fit between you and that airline? • You feel emotionally connected to this airline • Do you feel that this airline is fun? • Do you believe that you will be travelling with this airline for a long time? • Suppose that airline is no longer available for travelling, to what extent would you feel ... Anxiety	Carroll, B.A., & Ahuvia, A.C. 2006. Some antecedents and outcomes of brand love. ***Marketing letters***, 17: 79-89 Bagozzi, P.R., Batra, R., & Ahuvia, A. 2016. Brand love: development and validation of a practical scale. ***Marketing letters***, 28: 1-14

		• Please express your overall feelings and evaluation towards that airline (1-negative to 5-positive) (Bagozzi *et al.*, 2016)	
Consumer Engagement	• Engagement lifetime value (Own Purchases) – *"…customer purchase products from a firm…"* (Kumar and Pansari, 2016:500) • Engagement referral value (Incentivized Referrals) – "*Customers help in attracting customers who would not be attracted by the traditional marketing channels*" (Kumar and Pansari, 2016:500) • Engagement influence value (Social Influence) – *"…Impact customers make on social media (social networking site)…"* (Kumar and Pansari, 2016: 500) • Engagement knowledge value (Knowledge Sharing) – *"…Customers are actively involved in improving a company's products/services by providing*	**CLV** • I do not get my money's worth it when I purchase things from that airline (REVERSED) • I will continue buying products/services of that airline in the near future • My purchases with that airline make me content • Owning the products/services of this airline makes me happy **CRV** • I promote this airline because of the monetary referral benefits provided by the brand • In addition to the value derived from the product, the monetary referral incentives also encourage me to refer this airline to my friends and relatives • I enjoy referring this airline, I refer to my friends and relatives because of the monetary referral incentives • Given that I use this airline, I refer my friends and relatives to this brand because of the monetary referral incentives **CIV** • I do not actively discuss this airline brand on any media (REVERSED) • I love talking about my brand experience • I discuss the benefits that I get from this airline with others • I am part of this airline and mention it in my conversations **CKV** • I provide feedback about my experiences with the airline to the firm	Kumar, V., & Pansari, A. 2016. Competitive advantage through engagement. ***Journal of marketing research***, 53:497-514

	feedback/suggestions…" (Kumar and Pansari, 2016: 500)	• The following statements begin with "I provide suggestions/feedback..." ...for improving the performance of the airline • The following statements begin with "I provide suggestions/feedback..." ... about new products/services of that airline • The following statements begin with "I provide suggestions/feedback..." ... for developing new products/services for this airline (Kumar *et al.*, 2016)	
Co-creation of value	• Meaningfulness: "…*Is an individual's (agent or beneficiary) belief in service's' significance, importance and worth…."* (Busser *et al*., 2018: 72) • Collaboration: *"…Sense of open alliance, cooperation for mutual gain between two or more actors involved in co-creation. It is having a mutual understanding, common vision, and functional interdependence bringing together two or more actors to achieve shared objectives that are not achievable by one actor*	**Meaningfulness** • It is meaningful • This is important to me • The time I spent on it is worthwhile • It is valuable to me • My effort is worthwhile **Collaboration** • We are a team • We create it together • We are working together • We cooperate with each other • We collaborate on the project **Contribution** • I share my knowledge • I contribute my skills to this • I contribute my experience to this • I invest my resources • I make a personal investment in this **Recognition** • I receive credit for this • Our results are recognized	Busser, J.A., & Shulga, L.V. 2018. Co-created value – Multidimensional scale and nomological network. ***Tourism management***, 65: 69-86

	alone…" (Busser *et al.*, 2018:75) • Contribution: *"…A beneficiary shares his or her own resources to achieve desirable outcomes…"* (Busser *et al*., 2018: 75) • Recognition: "…*It is a beneficiaries' acknowledge (intrinsic and extrinsic) of their inherent value…"* (Busser *et al.*, 2018: 75) • Affective response: "…*A feeling state that occurs in response to a specific stimulus, based on feelings with a potential range of cognitive effort…"* (Busser *et al*., 2018:75)	• Others recognized the outcome • Others recognize me for this • We achieve mutual benefits **Affective response** • This is fun • This is entertaining • This is enjoyable • This is interesting • It is exciting (Busser *et al*., 2018)	

A.5. Email sent to ANA Airport



Tese mestrado_Experiência de voo_ANA Aeroportos

Inês Moura <inesfilipamoura@gmail.com> 24/04/2018, 20:45
para lisbon.airport

Olá, boa tarde,

O meu nome é Inês Moura, sou aluna de mestrado do ISCTE e estou neste momento a fazer a minha tese de mestrado.

A tese é sobre experiência de voo e para um estudo da mesma - envolvimento dos consumidores com as marcas de companhias aéreas preciso recolher inquéritos a pessoas que viajem.

O local que me lembrei que seria o mais adequado para recolher inquéritos seria o aeroporto - porque aí garantia que os consumidores ou tinham acabado de viajar ou iam viajar.

Para tal, gostaría de saber se tinha a vossa autorização para fazer os inquéritos no aeroporto (se quiserem envio-vos uma cópia dos mesmos).

Se houver interesse, quando acabar a tese posso desenvolver uma monofolha com as principais conclusões da analise do consumidor às companhias aéreas para vos dar.

Eu não tenho a certeza que este será o local correto para enviar este email. Se não for, podem-me indicar alguém do departamento de marketing e/ou comunicação do aeroporto, por favor?

Obrigada,

Responder Encaminhar

A.6. Questionnaires coding

Low cost or Flag?	
Low cost	1
Flag	2

Likert-Scale					
Normal		**Reverse**		**Brand Love scale**	
Strongly Disagree	1	Strongly Agree	1	Not at all	1
Disagree	2	Agree	2	No	2
Neutral	3	Neutral	3	Moderately	3
Agree	4	Disagree	4	Yes	4
Strongly Agree	5	Strongly Disagree	5	Very much	5

Do you consider it has all technologies equiment …?	
Yes	1
No	0

Age			
16 to 20 years	1	41 to 50 years	4
21 to 30 years	2	51 to 60 years	5
31 to 40 years	3	more than 60 years	6

Education Level			
High School or Less	1	Graduate degree (Master/PhD)	3
Bacherlor's degree	2	No response	4

A. Principal component analysis

B.1. In-flight characteristics – Air Quality

KMO and Bartlett's Test

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling		**.660**
Bartlett's Test of Sphericity	Approx. Chi-Square	105.180
	df	3
	Sig.	**.000**

Communalities

Communalities		
	Initial	Extraction
AAQ1	1.000	.646
AAQ2	1.000	.591
AAQ3	1.000	.580

Extraction Method: Principal Component Analysis.

Total variance explained

Total Variance Explained						
	Initial Eigenvalues			Extraction Sums of Squared Loadings		
Component	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	1.818	60.587	60.587	1.818	**60.587**	60.587
2	.634	21.135	81.722			
3	.548	18.278	100.000			

Extraction Method: Principal Component Analysis.

Component matrix

Component Matrix[a]	
	Component
	1
AAQ1	.804
AAQ2	.769
AAQ3	.762

Extraction Method: Principal Component
a. 1 components extracted.

Rotated component matrix

Rotated Component Matrix[a]

a. Only one component was extracted. The solution cannot be rotated.

B.1. In-flight characteristics - Temperature

KMO and Bartlett's Test

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling		**.684**
Bartlett's Test of Sphericity	Approx. Chi-Square	456.157
	df	6
	Sig.	**.000**

Communalities

Communalities		
	Initial	Extraction
AT1	1.000	.749
AT2	1.000	.550
AT3	1.000	.737
AT4	1.000	.637

Extraction Method: Principal Component Analysis.

Total variance explained

Total Variance Explained						
	Initial Eigenvalues			Extraction Sums of Squared Loadings		
Component	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.673	66.819	66.819	2.673	**66.819**	66.819
2	.769	19.223	86.042			
3	.387	9.676	95.718			
4	.171	4.282	100.000			

Extraction Method: Principal Component Analysis.

Component matrix

Component Matrix[a]	
	Component
	1
AT1	.865
AT2	.742
AT3	.859
AT4	.798

Extraction Method: Principal Component

a. 1 components extracted.

Rotated component matrix

Rotated Component Matrix[a]

a. Only one component was extracted. The solution cannot be rotated.

B.1. In-flight characteristics - Food

1. KMO and Bartlett's Test

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling		**.500**
Bartlett's Test of Sphericity	Approx. Chi-Square	33.499
	df	1
	Sig.	**.000**

2. Communalities

Communalities		
	Initial	Extraction
AF1	1.000	.684
AF2	1.000	.684

Extraction Method: Principal Component Analysis.

3. Total variance explained

Total Variance Explained						
	Initial Eigenvalues			Extraction Sums of Squared Loadings		
Component	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	1.368	68.389	68.389	1.368	**68.389**	68.389
2	.632	31.611	100.000			

Extraction Method: Principal Component Analysis.

4. Component matrix

Component Matrix[a]	
	Component
	1
AF1	.827
AF2	.827

Extraction Method: Principal Component Analysis.
a. 1 components extracted.

5. Rotated component Matrix

Rotated Component Matrix[a]

a. Only one component was extracted. The solution cannot be rotated.

B.1. In-flight characteristics - Layout

1. KMO and Bartlett's Test

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling		**.667**
Bartlett's Test of Sphericity	Approx. Chi-Square	518.077
	df	10
	Sig.	**.000**

2. Communalities

Communalities		
	Initial	Extraction
AL1	1.000	.724
AL2	1.000	.856
AL3	1.000	.882
AL4	1.000	.741
AL5	1.000	.750

Extraction Method: Principal Component Analysis.

3. Total variance explained

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.476	49.529	49.529	2.476	49.529	49.529	2.475	**49.507**	49.507
2	1.476	29.514	79.043	1.476	29.514	79.043	1.477	**29.536**	79.043
3	.549	10.985	90.028						
4	.349	6.989	97.017						
5	.149	2.983	100.000						

Extraction Method: Principal Component Analysis.

4. Component matrix

Component Matrix[a]		
	Component	
	1	2
AL1	-.075	.848
AL2	.922	-.070
AL3	.939	.036
AL4	.007	.861
AL5	.860	.102

Extraction Method: Principal Component Analysis.

a. 2 components extracted.

5. Rotated component matrix

Rotated Component Matrix[a]		
	Component	
	1	2
AL1	-.046	**.850**
AL2	**.920**	-.100
AL3	**.939**	.004
AL4	.036	**.860**
AL5	**.863**	.073

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.[a]

a. Rotation converged in 3 iterations.

6. Component transformation matrix

Component Transformation Matrix		
Component	1	2
1	.999	-.033
2	.033	.999

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

B.1. In-flight characteristics - Crew

1. KMO and Bartlett's Test

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling		**.788**
Bartlett's Test of Sphericity	Approx. Chi-Square	657.953
	df	6
	Sig.	**.000**

2. Communalities

Communalities		
	Initial	Extraction
AC1	1.000	.856
AC2	1.000	.832
AC3	1.000	.599
AC4	1.000	.781

Extraction Method: Principal Component Analysis.

3. Total variance explained

Total Variance Explained						
	Initial Eigenvalues			Extraction Sums of Squared Loadings		
Component	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3.067	76.678	76.678	3.067	**76.678**	76.678
2	0.512	12.798	89.476			
3	.300	7.488	96.964			
4	.121	3.036	100.000			

Extraction Method: Principal Component Analysis.

4. Component matrix

Component Matrix[a]	
	Component
	1
AC1	.925
AC2	.912
AC3	.774
AC4	.884

Extraction Method: Principal Component
a. 1 components extracted.

5. Rotated component matrix

Rotated Component Matrix[a]

a. Only one component was extracted. The solution cannot be rotated.

B.1. In-flight characteristics - Odour

1. KMO and Bartlett's Test

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling		**.688**
Bartlett's Test of Sphericity	Approx. Chi-Square	276.217
	df	3
	Sig.	**.000**

2. Communalities

Communalities		
	Initial	Extraction
AO1	1.000	.673
AO2	1.000	.822
AO3	1.000	.746

Extraction Method: Principal Component Analysis.

3. Total variance explained

Total Variance Explained						
	Initial Eigenvalues			Extraction Sums of Squared Loadings		
Component	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.241	74.710	74.710	2.241	**74.710**	74.710
2	0.487	16.242	90.952			
3	.271	9.048	100.000			

Extraction Method: Principal Component Analysis.

4. Component matrix

Component Matrix[a]	
	Component
	1
AO1	.820
AO2	.907
AO3	.864

Extraction Method: Principal Component Analysis.

a. 1 components extracted.

5. Rotated component matrix

Rotated Component Matrix[a]

a. Only one component was extracted. The solution cannot be rotated.

B.1. In-flight characteristics - Noise

1. KMO and Bartlett's Test

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling		**.500**
Bartlett's Test of Sphericity	Approx. Chi-Square	208.236
	df	1
	Sig.	**.000**

2. Communalities

Communalities		
	Initial	Extraction
AN1	1.000	.886
AN2	1.000	.886

Extraction Method: Principal Component Analysis.

3. Total variance explained

Total Variance Explained						
	Initial Eigenvalues			Extraction Sums of Squared Loadings		
Component	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	1.771	88.562	88.562	1.771	**88.562**	88.562
2	0.229	11.438	100.000			

Extraction Method: Principal Component Analysis.

4. Component matrix

Component Matrix[a]	
	Component
	1
AN1	.941
AN2	.941

Extraction Method: Principal Component Analysis.

a. 1 components extracted.

5. Rotated component matrix

Rotated Component Matrix[a]

a. Only one component was extracted. The solution cannot be rotated.

B.2. Customer-to-customer interaction/exchange

1. KMO and Bartlett's Test

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling		**.844**
Bartlett's Test of Sphericity	Approx. Chi-Square	631.544
	df	15
	Sig.	**.000**

2. Communalities

Communalities		
	Initial	Extraction
C2CE1	1.000	.756
C2CE2	1.000	.043
C2CE3	1.000	.677
C2CE4	1.000	.647
C2CE5	1.000	.726
C2CE6	1.000	.663

Extraction Method: Principal Component Analysis.

3. Total variance explained

Total Variance Explained						
	Initial Eigenvalues			Extraction Sums of Squared Loadings		
Component	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3.511	58.520	58.520	3.511	**58.520**	58.520
2	0.990	16.507	75.027			
3	.514	8.558	83.586			
4	.447	7.442	91.028			
5	.287	4.777	95.805			
6	.252	4.195	100.000			

Extraction Method: Principal Component Analysis.

4. Component matrix

Component Matrix[a]	
	Component
	1
C2CE1	.869
C2CE2	.207
C2CE3	.823
C2CE4	.804
C2CE5	.852
C2CE6	.814

Extraction Method: Principal Component Analysis.
a. 1 components extracted.

5. Rotated component matrix

Rotated Component Matrix[a]

a. Only one component was extracted. The solution cannot be rotated.

B.3. Brand Experience - Sensory

1. KMO and Bartlett's Test

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling		**.624**
Bartlett's Test of Sphericity	Approx. Chi-Square	253.620
	df	3
	Sig.	**.000**

2. Communalities

Communalities		
	Initial	Extraction
BES1	1.000	.483
BES2	1.000	.811
BES3	1.000	.797

Extraction Method: Principal Component Analysis.

3. Total variance explained

Total Variance Explained						
	Initial Eigenvalues			Extraction Sums of Squared Loadings		
Component	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.091	69.699	69.699	2.091	**69.699**	69.699
2	0.673	22.430	92.129			
3	.236	7.871	100.000			

Extraction Method: Principal Component Analysis.

4. Component matrix

Component Matrix[a]	
	Component
	1
BES1	.695
BES2	.900
BES3	.893

Extraction Method: Principal Component Analysis.

a. 1 components extracted.

5. Rotated component matrix

Rotated Component Matrix[a]

a. Only one component was extracted. The solution cannot be rotated.

B.3. Brand Experience - Affective

1. KMO and Bartlett's Test

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling		**.655**
Bartlett's Test of Sphericity	Approx. Chi-Square	238.212
	df	3
	Sig.	**.000**

2. Communalities

Communalities		
	Initial	Extraction
BEA1	1.000	.558
BEA2	1.000	.767
BEA3	1.000	.795

Extraction Method: Principal Component Analysis.

3. Total variance explained

Total Variance Explained						
	Initial Eigenvalues			Extraction Sums of Squared Loadings		
Component	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.120	70.656	70.656	2.120	**70.656**	70.656
2	0.602	20.062	90.718			
3	.278	9.282	100.000			

Extraction Method: Principal Component Analysis.

4. Component matrix

Component Matrix[a]	
	Component
	1
BEA1	.747
BEA2	.876
BEA3	.892

Extraction Method: Principal Component Analysis.

a. 1 components extracted.

5. Rotated component matrix

Rotated Component Matrix[a]

a. Only one component was extracted. The solution cannot be rotated.

B.3. Brand Experience - Intellectual

1. KMO and Bartlett's Test

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling		**.537**
Bartlett's Test of Sphericity	Approx. Chi-Square	88.308
	df	3
	Sig.	**.000**

2. Communalities

Communalities		
	Initial	Extraction
BEI1	1.000	.231
BEI2	1.000	.672
BEI3	1.000	.733

Extraction Method: Principal Component Analysis.

3. Total variance explained

Total Variance Explained						
	Initial Eigenvalues			Extraction Sums of Squared Loadings		
Component	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	1.636	54.524	54.524	1.636	**54.524**	54.524
2	0.905	30.151	84.675			
3	.460	15.325	100.000			

Extraction Method: Principal Component Analysis.

4. Component matrix

Component Matrix[a]	
	Component
	1
BEI1	.480
BEI2	.819
BEI3	.856

Extraction Method: Principal Component Analysis.

a. 1 components extracted.

5. Rotated component matrix

Rotated Component Matrix[a]

a. Only one component was extracted. The solution cannot be rotated.

B.3. Brand experience - Behavioral

1. KMO and Bartlett's Test

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling		**.503**
Bartlett's Test of Sphericity	Approx. Chi-Square	172.268
	df	3
	Sig.	**.000**

2. Communalities

Communalities		
	Initial	Extraction
BEB1	1.000	.822
BEB2	1.000	.851
BEB3	1.000	.081

Extraction Method: Principal Component Analysis.

3. Total variance explained

Total Variance Explained						
	Initial Eigenvalues			Extraction Sums of Squared Loadings		
Component	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	1.754	58.455	58.455	1.754	**58.455**	58.455
2	0.969	32.293	90.748			
3	.278	9.252	100.000			

Extraction Method: Principal Component Analysis.

4. Component matrix

Component Matrix[a]	
	Component
	1
BEB1	.906
BEB2	.923
BEB3	.284

Extraction Method: Principal Component Analysis.

a. 1 components extracted.

5. Rotated component matrix

Rotated Component Matrix[a]

a. Only one component was extracted. The solution cannot be rotated.

B.4. Co-creation - Meaningfulness

1. KMO and Bartlett's Test

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling		**.847**
Bartlett's Test of Sphericity	Approx. Chi-Square	510.128
	df	10
	Sig.	**.000**

2. Communalities

Communalities		
	Initial	Extraction
CCM1	1.000	.716
CCM2	1.000	.520
CCM3	1.000	.700
CCM4	1.000	.651
CCM5	1.000	.651

Extraction Method: Principal Component Analysis.

3. Total variance explained

Total Variance Explained						
	Initial Eigenvalues			Extraction Sums of Squared Loadings		
Component	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3.237	64.738	64.738	3.237	**64.738**	64.738
2	0.636	12.712	77.451			
3	.449	8.971	86.422			
4	.375	7.503	93.925			
5	.304	6.075	100.000			

Extraction Method: Principal Component Analysis.

4. Component matrix

Component Matrix[a]	
	Component
	1
CCM1	.846
CCM2	.721
CCM3	.837
CCM4	.807
CCM5	.807

Extraction Method: Principal Component Analysis.

a. 1 components extracted.

5. Rotated component matrix

Rotated Component Matrix[a]

a. Only one component was extracted. The solution cannot be rotated.

B.4. Co-creation - Collaboration

1. KMO and Bartlett's Test

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling		**.787**
Bartlett's Test of Sphericity	Approx. Chi-Square	431.213
	df	10
	Sig.	**.000**

2. Communalities

Communalities		
	Initial	Extraction
CCC1	1.000	.253
CCC2	1.000	.807
CCC3	1.000	.735
CCC4	1.000	.632
CCC5	1.000	.414

Extraction Method: Principal Component Analysis.

3. Total variance explained

Total Variance Explained						
	Initial Eigenvalues			Extraction Sums of Squared Loadings		
Component	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.840	56.791	56.791	2.840	**56.791**	56.791
2	0.860	17.207	73.998			
3	.685	13.708	87.706			
4	.381	7.627	95.333			
5	.233	4.667	100.000			

Extraction Method: Principal Component Analysis.

4. Component matrix

Component Matrix[a]	
	Component
	1
CCC1	.503
CCC2	.898
CCC3	.857
CCC4	.795
CCC5	.643

Extraction Method: Principal Component Analysis.

a. 1 components extracted.

5. Rotated component matrix

Rotated Component Matrix[a]

a. Only one component was extracted. The solution cannot be rotated.

B.4. Co-creation - Contribution

1. KMO and Bartlett's Test

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling		**.811**
Bartlett's Test of Sphericity	Approx. Chi-Square	848.541
	df	10
	Sig.	**.000**

2. Communalities

Communalities		
	Initial	Extraction
CCCon1	1.000	.229
CCCon2	1.000	.859
CCCon3	1.000	.828
CCCon4	1.000	.800
CCCon5	1.000	.760

Extraction Method: Principal Component Analysis.

3. Total variance explained

Total Variance Explained						
	Initial Eigenvalues			Extraction Sums of Squared Loadings		
Component	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3.476	69.518	69.518	3.476	**69.518**	69.518
2	0.830	16.610	86.128			
3	.392	7.835	93.963			
4	.195	3.891	97.854			
5	.107	2.146	100.000			

Extraction Method: Principal Component Analysis.

4. Component matrix

Component Matrix[a]	
	Component
	1
CCCon1	.479
CCCon2	.927
CCCon3	.910
CCCon4	.894
CCCon5	.872

Extraction Method: Principal Component Analysis.

a. 1 components extracted.

5. Rotated component matrix

Rotated Component Matrix[a]

a. Only one component was extracted. The solution cannot be rotated.

B.4. Co-creation - Recognition

1. KMO and Bartlett's Test

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling		**.870**
Bartlett's Test of Sphericity	Approx. Chi-Square	1199.185
	df	10
	Sig.	**.000**

2. Communalities

Communalities		
	Initial	Extraction
CCR1	1.000	.729
CCR2	1.000	.879
CCR3	1.000	.919
CCR4	1.000	.822
CCR5	1.000	.755

Extraction Method: Principal Component Analysis.

3. Total variance explained

Total Variance Explained						
	Initial Eigenvalues			Extraction Sums of Squared Loadings		
Component	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	4.104	82.082	82.082	4.104	**82.082**	82.082
2	0.344	6.886	88.968			
3	.304	6.084	95.052			
4	.179	3.583	98.634			
5	.068	1.366	100.000			

Extraction Method: Principal Component Analysis.

4. Component matrix

Component Matrix[a]	
	Component
	1
CCR1	.854
CCR2	.937
CCR3	.959
CCR4	.907
CCR5	.869

Extraction Method: Principal Component Analysis.

a. 1 components extracted.

5. Rotated component matrix

Rotated Component Matrix[a]

a. Only one component was extracted. The solution cannot be rotated.

B.4. Co-creation – Affective response

1. KMO and Bartlett's Test

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling		**.901**
Bartlett's Test of Sphericity	Approx. Chi-Square	1579.839
	df	10
	Sig.	**.000**

2. Communalities

Communalities		
	Initial	Extraction
CCA1	1.000	.915
CCA2	1.000	.902
CCA3	1.000	.893
CCA4	1.000	.876
CCA5	1.000	.892

Extraction Method: Principal Component Analysis.

3. Total variance explained

Total Variance Explained						
	Initial Eigenvalues			Extraction Sums of Squared Loadings		
Component	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	4.478	89.562	89.562	4.478	**89.562**	89.562
2	0.190	3.807	93.369			
3	.148	2.961	96.330			
4	.115	2.300	98.631			
5	.068	1.369	100.000			

Extraction Method: Principal Component Analysis.

4. Component matrix

Component Matrix[a]	
	Component
	1
CCA1	.957
CCA2	.950
CCA3	.945
CCA4	.936
CCA5	.945

Extraction Method: Principal Component Analysis.

a. 1 components extracted.

5. Rotated component matrix

Rotated Component Matrix[a]

a. Only one component was extracted. The solution cannot be rotated.

B.5. Consumer engagement – Lifetime value

1. KMO and Bartlett's Test

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling		**.760**
Bartlett's Test of Sphericity	Approx. Chi-Square	428.702
	df	6
	Sig.	**.000**

2. Communalities

Communalities		
	Initial	Extraction
CECL1	1.000	.506
CECL2	1.000	.758
CECL3	1.000	.786
CECL4	1.000	.699

Extraction Method: Principal Component Analysis.

3. Total variance explained

Total Variance Explained						
	Initial Eigenvalues			Extraction Sums of Squared Loadings		
Component	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.749	68.723	68.723	2.749	**68.723**	68.723
2	0.618	15.455	84.177			
3	.411	10.285	94.463			
4	.221	5.537	100.000			

Extraction Method: Principal Component Analysis.

4. Component matrix

Component Matrix[a]	
	Component
	1
CECL1	-.711
CECL2	.871
CECL3	.887
CECL4	.836

Extraction Method: Principal Component Analysis.
a. 1 components extracted.

5. Rotated component matrix

Rotated Component Matrix[a]

a. Only one component was extracted. The solution cannot be rotated.

B.5. Consumer engagement – referral value

1. KMO and Bartlett's Test

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling		**.854**
Bartlett's Test of Sphericity	Approx. Chi-Square	793.905
	df	6
	Sig.	**.000**

2. Communalities

Communalities		
	Initial	Extraction
CECR1	1.000	.766
CECR2	1.000	.809
CECR3	1.000	.867
CECR4	1.000	.885

Extraction Method: Principal Component Analysis.

3. Total variance explained

Total Variance Explained						
	Initial Eigenvalues			Extraction Sums of Squared Loadings		
Component	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3.326	83.157	83.157	3.326	**83.157**	83.157
2	0.309	7.715	90.872			
3	.233	5.823	96.694			
4	.132	3.306	100.000			

Extraction Method: Principal Component Analysis.

4. Component matrix

Component Matrix[a]	
	Component
	1
CECR1	.875
CECR2	.899
CECR3	.931
CECR4	.941

Extraction Method: Principal Component Analysis.
a. 1 components extracted.

5. Rotated component matrix

Rotated Component Matrix[a]

a. Only one component was extracted. The solution cannot be rotated.

B.5. Consumer engagement – influence value

1. KMO and Bartlett's Test

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling		**.691**
Bartlett's Test of Sphericity	Approx. Chi-Square	173.245
	df	6
	Sig.	**.000**

2. Communalities

Communalities		
	Initial	Extraction
CECI1	1.000	.239
CECI2	1.000	.681
CECI3	1.000	.627
CECI4	1.000	.548

Extraction Method: Principal Component Analysis.

3. Total variance explained

Total Variance Explained						
	Initial Eigenvalues			Extraction Sums of Squared Loadings		
Component	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.094	52.347	52.347	2.094	**52.347**	52.347
2	0.875	21.875	74.222			
3	.610	15.255	89.477			
4	.421	10.523	100.000			

Extraction Method: Principal Component Analysis.

4. Component matrix

Component Matrix[a]	
	Component
	1
CECI1	-.489
CECI2	.825
CECI3	.792
CECI4	.740

Extraction Method: Principal Component Analysis.

a. 1 components extracted.

5. Rotated component matrix

Rotated Component Matrix[a]

a. Only one component was extracted. The solution cannot be rotated.

B.5. Consumer engagement – Knowledge value

1. KMO and Bartlett's Test

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling		**.812**
Bartlett's Test of Sphericity	Approx. Chi-Square	1000.080
	df	6
	Sig.	**.000**

2. Communalities

Communalities		
	Initial	Extraction
CECK1	1.000	.587
CECK2	1.000	.873
CECK3	1.000	.915
CECK4	1.000	.913

Extraction Method: Principal Component Analysis.

3. Total variance explained

Total Variance Explained						
	Initial Eigenvalues			Extraction Sums of Squared Loadings		
Component	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3.288	82.205	82.205	3.288	**82.205**	82.205
2	0.505	12.617	94.822			
3	.158	3.949	98.771			
4	.049	1.229	100.000			

Extraction Method: Principal Component Analysis.

4. Component matrix

Component Matrix[a]	
	Component
	1
CECK1	.766
CECK2	.934
CECK3	.957
CECK4	.956

Extraction Method: Principal Component Analysis.

a. 1 components extracted.

5. Rotated component matrix

Rotated Component Matrix[a]

a. Only one component was extracted. The solution cannot be rotated.

B. Regressions analysis

C.1. Lifetime value as dependent variable: Atmospherics in-flight characteristics

Table 1 – Variables entered/removed

Variables Entered/Removed[a]

Model	Variables Entered	Variables Removed	Method
1	Classes on the plane (AL1,AL4), Overall layout (AL2, AL3, AL5), Food (AF), Odour (AO), Crew (AC), Temperature (AT), Noise (AN), Air Quality (AAQ) [b]		Enter

a. Dependent Variable: Consumer engagement lifetime value (CECL)

b. All requested variables entered.

Table 2 - Model Summary

Model Summary[b]

Model	R	R Square	**Adjusted R Square**	Std. Error of the Estimate	**Durbin-Watson**
1	.567[a]	.321	**.296**	.73765	**1.929**

a. Predictors: (Constant), Noise (AN), Classes on the plane (AL1,AL4), Overall layout (AL2, AL3, AL5), Food (AF), Odour (AO), Crew (AC), Temperature (AT), Noise (AN), Air Quality (AAQ)

b. Dependent Variable: Consumer engagement lifetime value (CECL)

Table 3 - ANOVA

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	55.358	8	6.920	12.717	**.000**[b]
	Residual	116.988	215	.544		
	Total	172.346	223			

a. Dependent Variable: Consumer engagement lifetime value (CECL)

b. Predictors: (Constant), Classes on the plane (AL1,AL4), Overall layout (AL2, AL3, AL5), Food (AF), Odour (AO), Crew (AC), Temperature (AT), Noise (AN), Air Quality (AAQ)

Table 4 – Coefficients

Coefficients[a]

Model		Unstandardized Coefficients		**Standardized Coefficients**	t	**Sig.**	Collinearity Statistics		**Adjusted R Square**
		B	Std. Error	**Beta**			Tolerance	VIF	
1	(Constant)	.826	.423		1.952	.052			
	Air Quality (AAQ)	.275	.113	**.184**	2.442	**.015**	.559	1.790	
	Temperature (AT)	.012	.084	.010	.143	.887	.601	1.665	
	Food (AF)	-.050	.051	-.061	-.989	.324	.831	1.204	
	Crew (AC)	.463	.068	**.442**	6.843	**.000**	.755	1.324	29.60%
	Odour (AO)	-.129	.096	-.093	-1.336	.183	.658	1.519	
	Noise (AN)	.066	.072	.066	.924	.356	.623	1.606	
	Overall layout (AL2, AL3, AL5)	.045	.062	.054	.724	.470	.559	1.790	
	Classes on the plane (AL1,AL4)	.008	.047	.010	.164	.870	.838	1.193	

a. Dependent Variable: Consumer engagement lifetime value (CECL)

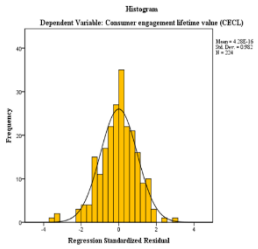
Table 5 – Residuals Statistics

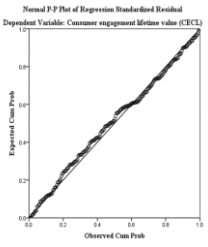
Residuals Statistics[a]

	Minimum	Maximum	**Mean**	Std. Deviation	N
Predicted Value	1.6789	4.6279	3.5391	.49824	224
Residual	-2.63586	2.30950	**.00000**	.72430	224
Std. Predicted Value	-3.734	2.185	.000	1.000	224
Std. Residual	-3.573	3.131	.000	.982	224

a. Dependent Variable: Consumer engagement lifetime value (CECL)

Charts





Scatterplot

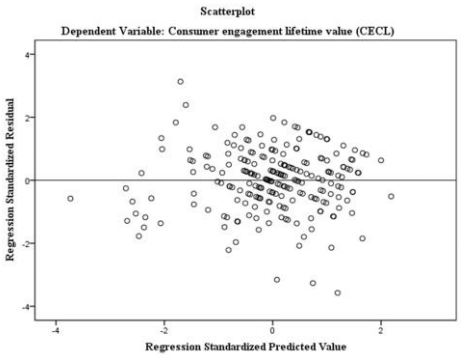


Table 5- Correlations statistics

Correlations

		Air Quality (AAQ)	Temperature (AT)	Food (AF)	Crew (AC)	Odour (AO)	Noise (AN)	Overall Layout (AL2, AL3, AL5)	Classes on the plane (AL1,AL4)	Unstandardized Residual
Air Quality (AAQ)	Pearson Correlation	1.000								
Temperature (AT)	Pearson Correlation	.549**	1.000							
	Sig. (2-tailed)	0.000								
Food (AF)	Pearson Correlation	0.047	.134*	1.000						
	Sig. (2-tailed)	0.483	0.045							
Crew (AC)	Pearson Correlation	.275**	.247**	-0.085	1.000					
	Sig. (2-tailed)	0.000	0.000	0.202						
Odour (AO)	Pearson Correlation	.482**	.457**	0.105	.301**	1.000				
	Sig. (2-tailed)	0.000	0.000	0.118	0.000					
Noise (AN)	Pearson Correlation	.429**	.374**	0.057	.375**	.419**	1.000			
	Sig. (2-tailed)	0.000	0.000	0.396	0.000	0.000				
Overall layout (AL2, AL3, AL5)	Pearson Correlation	.508**	.456**	-0.031	.437**	.348**	.514**	1.000		
	Sig. (2-tailed)	0.000	0.000	0.648	0.000	0.000	0.000			
Classes on the plane (AL1,AL4)	Pearson Correlation	-0.070	0.059	.345**	-0.041	-0.078	-0.125	-0.017	1.000	
	Sig. (2-tailed)	0.295	0.381	0.000	0.541	0.242	0.062	0.801		
Unstandardized Residual	Pearson Correlation	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	1.000
	Sig. (2-tailed)	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	

a. Correlation is significant at the 0.01 level (2-tailed)
b. Correlation is significant at the 0.05 level (2-tailed)

C.1. Lifetime value as dependent variable: Customer-to-customer interaction

Table 1) Variables Entered/Removed

Variables Entered/Removed[a]

Model	Variables Entered	Variables Removed	Method
1	Customer-to-customer interaction (C2C) [b]		Enter

a. Dependent Variable: Consumer engagement lifetime value (CECL)
b. All requested variables entered.

Table 2) Model Summary

Model Summary[b]

Model	R	R Square	**Adjusted R Square**	Std. Error of the Estimate
1	.022[a]	.000	**-.004**	.88940

a. Predictors: (Constant), Customer-to-customer interaction (C2C)
b. Dependent Variable: Consumer engagement lifetime value (CECL)

Table 3) ANOVA

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.084	1	.084	.106	**.745[b]**
	Residual	176.401	223	.791		
	Total	176.485	224			

a. Dependent Variable: Consumer engagement lifetime value (CECL)
b. Predictors: (Constant), Customer-to-customer interaction (C2C)

Table 4) Coefficients

Coefficients[a]

Model		Unstandardized Coefficients		**Standardized Coefficients**	t	Sig.	**Adjusted R Square**
		B	Std. Error	**Beta**			
1	(Constant)	3.588	.189		18.995	.000	0.00%
	Customer-to-customer interaction (C2C)	-.025	.078	-.022	-.326	.745	

a. Dependent Variable: Consumer engagement lifetime value (CECL)

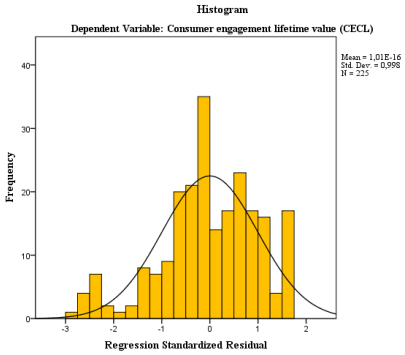
Table 4) Residuals Statistics

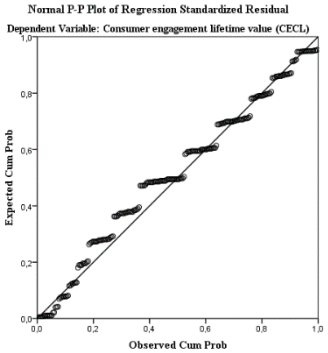
Residuals Statistics[a]

	Minimum	Maximum	**Mean**	Std. Deviation	N
Predicted Value	3.4865	3.5630	3.5300	.01938	225
Residual	-2.51838	1.49436	**.00000**	.88741	225
Std. Predicted Value	-2.244	1.703	.000	1.000	225
Std. Residual	-2.832	1.680	.000	.998	225

a. Dependent Variable: Consumer engagement lifetime value (CECL)

Charts





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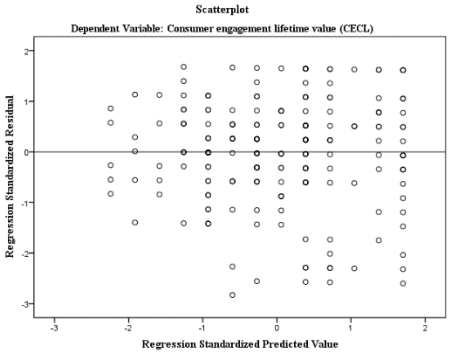


Table 5) Correlations

Correlations

		Customer-to-customer interaction (C2C)	Unstandardized Residual
Customer-to-customer interaction (C2C)	Pearson Correlation	1	
	Sig. (2-tailed)		
Unstandardized Residual	**Pearson Correlation**	**.000**	1
	Sig. (2-tailed)	1.000	

C.1. Lifetime value as dependent variable: Brand Experience

Model 1) Variables Entered/Removed

Variables Entered/Removed[a]

Model	Variables Entered	Variables Removed	Method
1	Brand sensory, Brand affective, Brand intellectual and Brand behavioural[b]		Enter

a. Dependent Variable: Consumer engagement lifetime value (CECL)

b. All requested variables entered.

Table 2) Model Summary

Model Summary[b]

Model	R	R Square	**Adjusted R Square**	Std. Error of the Estimate	**Durbin-Watson**
1	.653[a]	.427	**.416**	.67826	**1.887**

a. Predictors: (Constant), Brand sensory (BES), brand affective (BEA), brand intellectual (BEI) and brand behavioural (BEB)

b. Dependent Variable: Consumer engagement lifetime value (CECL)

Table 3) ANOVA

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	75.277	4	18.819	40.908	**.000[b]**
	Residual	101.208	220	.460		
	Total	176.485	224			

a. Dependent Variable: Consumer engagement lifetime value (CECL)

b. Predictors: (Constant), Brand sensory (BES), brand affective (BEA), brand intellectual (BEI) and brand behavioural (BEB)

Table 4) Coefficients

Coefficients[a]

Model			Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	**Standardized Coefficients Beta**	t	**Sig.**	Collinearity Statistics Tolerance	Collinearity Statistics VIF	Adjusted R Square
1	(Constant)		1.314	.205		6.408	.000			
	Brand experience sensory	**Sensory**	.168	.083	**.160**	2.034	**.043**	.419	2.389	41.60%
		Affective	.418	.081	**.427**	5.130	**.000**	.377	2.653	
		Intellectual	.002	.095	.002	.021	.984	.456	2.194	
		Behavioural	.152	.090	.131	1.692	.092	.438	2.282	

a. Dependent Variable: Consumer engagement lifetime value (CECL)

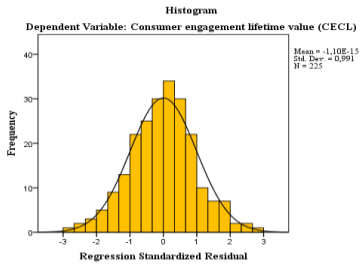
Table 4) Residuals Statistics

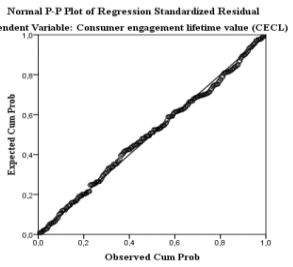
Residuals Statistics[a]

	Minimum	Maximum	**Mean**	Std. Deviation	N
Predicted Value	2.2122	5.0145	3.5300	.57970	225
Residual	-1.96169	1.94124	**.00000**	.67218	225
Std. Predicted Value	-2.273	2.561	.000	1.000	225
Std. Residual	-2.892	2.862	.000	.991	225

a. Dependent Variable: Consumer engagement lifetime value (CECL)

Charts





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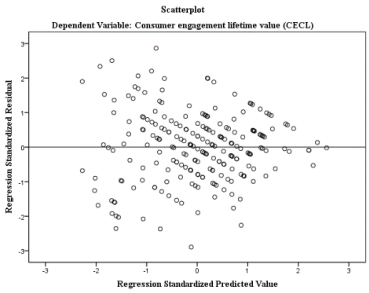


Table 5) Correlations

Correlations

			Unstandardized Residual	Brand experience dimensionality			
				Sensory	Affective	Intellectual	Behavioural
Unstandardized Residual		Pearson Correlation	1				
		Sig. (2-tailed)					
Brand experience dimensionality	Sensory	Pearson Correlation	**.000**	1			
		Sig. (2-tailed)	1.000				
	Affective	Pearson Correlation	**.000**	.728**	1		
		Sig. (2-tailed)	1.000	.000			
	Intellectual	Pearson Correlation	**.000**	.627**	.639**	1	
		Sig. (2-tailed)	1.000	.000	.000		
	Behavioural	Pearson Correlation	**.000**	.615**	.671**	.676**	1
		Sig. (2-tailed)	1.000	.000	.000	.000	

a. Correlation is significant at the 0.01 level (2-tailed)

C.1. Lifetime value as dependent variable: Brand Love

Table 1) Variables Entered/Removed

Variables Entered/Removed[a]

Model	Variables Entered	Variables Removed	Method
1	Brand Love (BL)[b]		Enter

a. Dependent Variable: Consumer engagement lifetime value (CECL)

b. All requested variables entered.

Table 2) Model Summary

Model Summary[b]

Model	R	R Square	**Adjusted R Square**	Std. Error of the Estimate
1	.619[a]	.383	**.380**	.69883

a. Predictors: (Constant), Brand Love (BL)

b. Dependent Variable: Consumer engagement lifetime value (CECL)

Table 3) ANOVA

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	**Sig.**
1	Regression	67.581	1	67.581	138.386	**.000[b]**
	Residual	108.904	223	.488		
	Total	176.485	224			

a. Dependent Variable: Consumer engagement lifetime value (CECL)

b. Predictors: (Constant), Brand Love (BL)

Table 4) Coefficients

Coefficients[a]

Model		Unstandardized Coefficients		**Standardized Coefficients**	t	**Sig.**	**Adjusted R Square**
		B	Std. Error	**Beta**			
1	(Constant)	1.676	.164		10.203	.000	38.00%
	Brand Love (BL)	.672	.057	**.619**	11.764	**.000**	

a. Dependent Variable: Consumer engagement lifetime value (CECL)

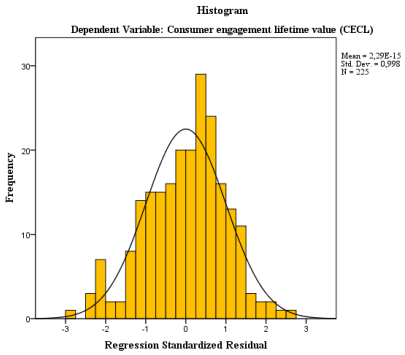
Table 4) Residuals Statistics

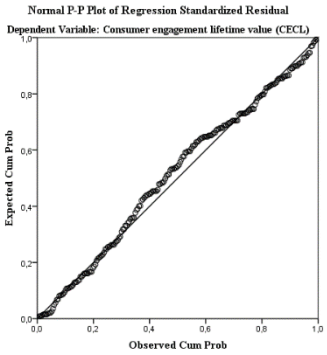
Residuals Statistics[a]

	Minimum	Maximum	**Mean**	Std. Deviation	N
Predicted Value	2.4519	5.0368	3.5300	.54928	225
Residual	-1.96891	1.82430	**.00000**	.69726	225
Std. Predicted Value	-1.963	2.743	.000	1.000	225
Std. Residual	-2.817	2.611	.000	.998	225

a. Dependent Variable: Consumer engagement lifetime value (CECL)

Charts





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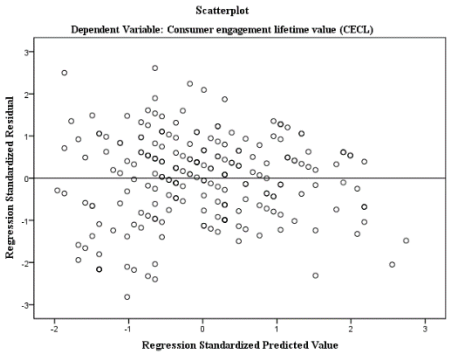


Table 5) Correlations

Correlations

		Unstandardized Residual	Brand Love (BL)
Unstandardized Residual	Pearson Correlation	1	
	Sig. (2-tailed)		
Brand Love (BL)	**Pearson Correlation**	**.000**	1
	Sig. (2-tailed)	1.000	

C.2. Referral value as dependent variable: Atmospherics in-flight characteristics

Table 1) Variables Entered/ Removed

Variables Entered/Removed[a]

Model	Variables Entered	Variables Removed	Method
1	Classes on the plane (AL1,AL4), Overall layout (AL2, AL3, AL5), Food (AF), Odour (AO), Crew (AC), Temperature (AT), Noise (AN), Air Quality (AAQ)b		Enter

a. Dependent Variable: Consumer engagement referral value (CECR)
b. All requested variables entered.

Table 2) Model Summary

Model Summary[b]

Model	R	R Square	**Adjusted R Square**	Std. Error of the Estimate	**Durbin-Watson**
1	.351[a]	.123	**.091**	.95292	**1.903**

a. Predictors: (Constant), Classes on the plane (AL1,AL4), Overall layout (AL2, AL3, AL5), Food (AF), Odour (AO), Crew (AC), Temperature (AT), Noise (AN), Air Quality (AAQ)
b. Dependent Variable: Consumer engagement referral value (CECR)

Table 3) ANOVA

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	27.487	8	3.436	3.784	.000[b]
	Residual	195.231	215	.908		
	Total	222.718	223			

a. Dependent Variable: Consumer engagement referral value (CECR)

b. Predictors: (Constant), Classes on the plane (AL1,AL4), Overall layout (AL2, AL3, AL5), Food (AF), Odour (AO), Crew (AC), Temperature (AT), Noise (AN), Air Quality (AAQ)

Table 4) Coefficients

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics		Adjusted R Square
		B	Std. Error	Beta			Tolerance	VIF	
1	(Constant)	.562	.547		1.029	.305			
	Air Quality (AAQ)	.165	.145	.097	1.137	.257	.559	1.790	
	Temperature (AT)	-.048	.108	-.037	-.444	.657	.601	1.665	
	Food (AF)	.081	.065	.087	1.237	.217	.831	1.204	
	Crew (AC)	.285	.087	**.240**	3.262	**.001**	.755	1.324	9.10%
	Odour (AO)	.002	.124	.001	0.013	.990	.658	1.519	
	Noise (AN)	.015	.093	.013	.163	.871	.623	1.606	
	Overall layout (AL2, AL3, AL5)	.073	.080	.078	.912	.363	.559	1.790	
	Classes on the plane (AL1,AL4)	.103	.061	.118	1.696	.091	.838	1.193	

a. Dependent Variable:Consumer engagement referral value (CECR)

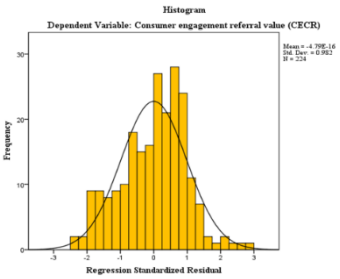
Table 4) Residuals Statistics

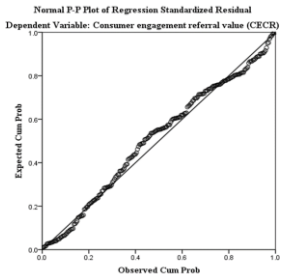
Residuals Statistics[a]

	Minimum	Maximum	**Mean**	Std. Deviation	N
Predicted Value	1.7107	3.9405	2.9386	.35108	224
Residual	-2.22035	2.79769	**.00000**	.93567	224
Std. Predicted Value	-3.497	2.854	.000	1.000	224
Std. Residual	-2.330	2.936	.000	.982	224

a. Dependent Variable: Consumer engagement referral value (CECR)

Charts





Scatterplot

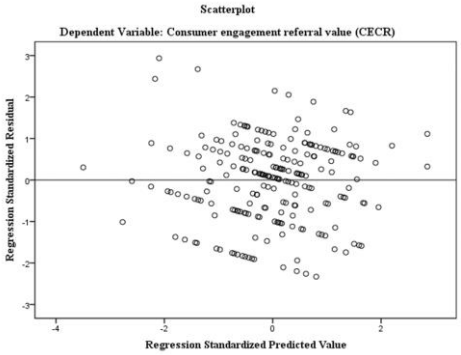


Table 5) Correlations

Correlations

		Air Quality (AAQ)	Temperature (AT)	Food (AF)	Crew (AC)	Odour (AO)	Noise (AN)	Overall layout (AL2, AL3, AL5)	Classes on the plane (AL1,AL4)	Unstandardized Residual
Air Quality (AAQ)	Pearson Correlation	1.000								
Temperature (AT)	Pearson Correlation	.549**	1.000							
	Sig. (2-tailed)	0.000								
Food (AF)	Pearson Correlation	0.047	.134*	1.000						
	Sig. (2-tailed)	0.483	0.045							
Crew (AC)	Pearson Correlation	.275**	.247**	-0.085	1.000					
	Sig. (2-tailed)	0.000	0.000	0.202						
Odour (AO)	Pearson Correlation	.482**	.457**	0.105	.301**	1.000				
	Sig. (2-tailed)	0.000	0.000	0.118	0.000					
Noise (AN)	Pearson Correlation	.429**	.374**	0.057	.375**	.419**	1.000			
	Sig. (2-tailed)	0.000	0.000	0.396	0.000	0.000				
Overall layout (AL2, AL3, AL5)	Pearson Correlation	.508**	.456**	-0.031	.437**	.348**	.514**	1.000		
	Sig. (2-tailed)	0.000	0.000	0.648	0.000	0.000	0.000			
Classes on the plane (AL1,AL4)	Pearson Correlation	-0.070	0.059	.345**	-0.041	-0.078	-0.125	-0.017	1.000	
	Sig. (2-tailed)	0.295	0.381	0.000	0.541	0.242	0.062	0.801		1.000
Unstandardized Residual	Pearson Correlation	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	1.000
	Sig. (2-tailed)	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	

a. Correlation is significant at the 0.01 level (2-tailed)
b. Correlation is significant at the 0.05 level (2-tailed)

C.2. Referral value as dependent variable: Customer-to-customer interaction

Table 1) Variables Entered/Removed

Variables Entered/Removed[a]

Model	Variables Entered	Variables Removed	Method
1	Customer-to-customer interaction (C2C) [b]		Enter

a. Dependent Variable: Consumer engagement referral value (CECR)
b. All requested variables entered.

Table 2) Model Summary

Model Summary[b]

Model	R	R Square	**Adjusted R Square**	Std. Error of the Estimate
1	.249[a]	.062	**.058**	.97411

a. Predictors: (Constant), Customer-to-customer interaction (C2C)
b. Dependent Variable: Consumer engagement referral value (CECR)

Table 3) ANOVA

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	**Sig.**
1	Regression	13.956	1	13.956	14.708	**.000[b]**
	Residual	211.601	223	.949		
	Total	225.557	224			

a. Dependent Variable: Consumer engagement referral value (CECR)
b. Predictors: (Constant), Customer-to-customer interaction (C2C)

Table 4) Coefficients

Coefficients[a]

Model		Unstandardized Coefficients		**Standardized Coefficients**			**Adjusted R Square**
		B	Std. Error	**Beta**	t	**Sig.**	
1	(Constant)	2.178	.207		10.525	.000	**36.40%**
	Customer-to-customer interaction (C2C)	.328	.086	**.249**	3.835	**.000**	

a. Dependent Variable: Consumer engagement referral value (CECR)

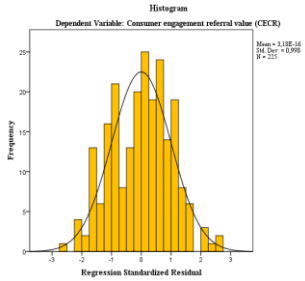
Table 4) Residuals Statistics

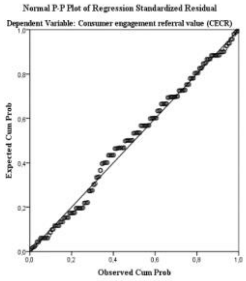
Residuals Statistics[a]

	Minimum	Maximum	**Mean**	Std. Deviation	N
Predicted Value	2.5061	3.4912	2.9311	.24961	225
Residual	-2.49117	2.49395	**.00000**	.97193	225
Std. Predicted Value	-1.703	2.244	.000	1.000	225
Std. Residual	-2.557	2.560	.000	.998	225

a. Dependent Variable: Consumer engagement referral value (CECR)

Charts





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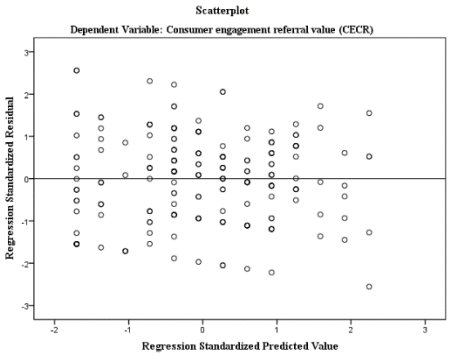


Table 5) Correlations

Correlations

		Unstandardized Residual	Customer-to-customer interaction (C2C)
Unstandardized Residual	Pearson Correlation	1	
	Sig. (2-tailed)		
Customer-to-customer interaction (C2C)	Pearson Correlation	**.000**	1
	Sig. (2-tailed)	1.000	

C.2. Referral value as dependent variable: Brand Experience

Table 1) Variables Entered/Removed

Variables Entered/Removed[a]

Model	Variables Entered	Variables Removed	Method
1	Brand sensory, Brand affective, Brand intellectual and Brand behavioural[b]		Enter

a. Dependent Variable: Consumer engagement referral value (CECR)

b. All requested variables entered.

Table 2) Table Summary

Model Summary[b]

Model	R	R Square	**Adjusted R Square**	Std. Error of the Estimate	**Durbin-Watson**
1	.469[a]	.220	**.206**	.89438	**1.975**

a. Predictors: (Constant), Brand sensory (BES), brand affective (BEA), brand intellectual (BEI) and brand behavioural (BEB)

b. Dependent Variable: Consumer engagement referral value (CECR)

Table 3) ANOVA

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	49.575	4	12.394	15.494	**.000[b]**
	Residual	175.982	220	.800		
	Total	225.557	224			

a. Dependent Variable: Consumer engagement referral value (CECR)

b. Predictors: (Constant), Brand sensory (BES), brand affective (BEA), brand intellectual (BEI) and brand behavioural (BEB)

Table 4) Coefficients

Coefficients[a]

Model			Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	**Standardized Coefficients Beta**	t	**Sig.**	Collinearity statistics Tolerance	Collinearity statistics VIF	Adjusted R square
1	(Constant)		.963	.270		3.569	.000			
	Brand experience dimensionality	Sensory	.156	.109	.132	1.430	.154	.419	2.389	20.60%
		Affective	-.103	.107	-.093	-.958	.339	.377	2.653	
		Intellectual	.163	.125	.115	1.304	.194	.456	2.194	
		Behavioural	.467	.119	**.354**	3.929	**.000**	.438	2.282	

a. Dependent Variable: Consumer engagement referral value (CECR)

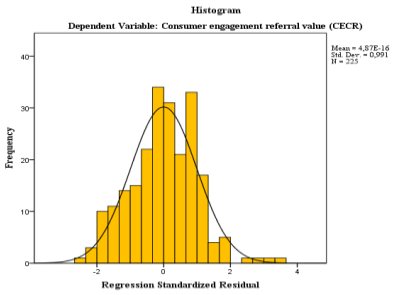
Table 4) Residuals Statistics

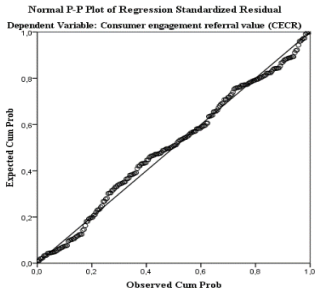
Residuals Statistics[a]

	Minimum	Maximum	**Mean**	Std. Deviation	N
Predicted Value	1.8883	4.1590	2.9311	.47044	225
Residual	-2.10628	2.99152	**.00000**	.88636	225
Std. Predicted Value	-2.217	2.610	.000	1.000	225
Std. Residual	-2.355	3.345	.000	.991	225

a. Dependent Variable: Consumer engagement referral value (CECR)

Charts





Scatterplot

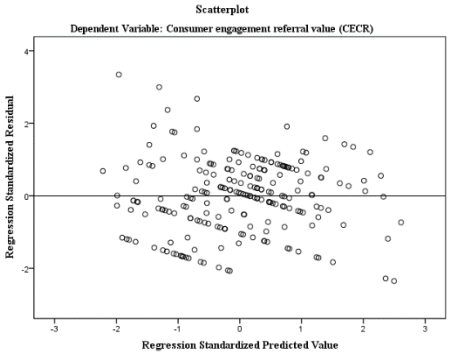


Table 5) Correlations

Correlations

		Sensory	Affective	Intellectual	Behavioural	Unstandardized Residual
Sensory	Pearson Correlation	1				
Affective	Pearson Correlation	.728[a]	1			
	Sig. (2-tailed)	.000				
Intellectual	Pearson Correlation	.627[a]	.639[a]	1		
	Sig. (2-tailed)	.000	.000			
Behavioural	Pearson Correlation	.615[a]	.671[a]	.676[a]	1	
	Sig. (2-tailed)	.000	.000	.000		
Unstandardized Residual	**Pearson Correlation**	**.000**	**.000**	**.000**	**.000**	1
	Sig. (2-tailed)	1.000	1.000	1.000	1.000	

a. Correlation is significant at the 0.01 level (2-tailed)

C.2. Referral value as dependent variable: Brand Love

Table 1) Variables entered/removed

Variables Entered/Removed[a]

Model	Variables Entered	Variables Removed	Method
1	Brand Love (BL)[b]		Enter

a. Dependent Variable: Consumer engagement referral value (CECR)

b. All requested variables entered.

Table 2) Model Summary

Model Summary[b]

Model	R	R Square	**Adjusted R Square**	Std. Error of the Estimate
1	.430[a]	.185	**.181**	.90793

a. Predictors: (Constant), Brand Love (BL)

b. Dependent Variable: Consumer engagement referral value (CECR)

Table 3) ANOVA

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	**Sig.**
1	Regression	41.730	1	41.730	50.623	**.000[b]**
	Residual	183.827	223	.824		
	Total	225.557	224			

a. Dependent Variable: Consumer engagement referral value (CECR)

b. Predictors: (Constant), Brand Love (BL)

Table 4) Coefficients

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Adjusted R Square
		B	Std. Error	Beta			
1	(Constant)	1.475	.213		6.908	.000	18.10%
	Brand Love (BL)	.528	.074	**.430**	7.115	**.000**	

a. Dependent Variable: Consumer engagement referral value (CECR)

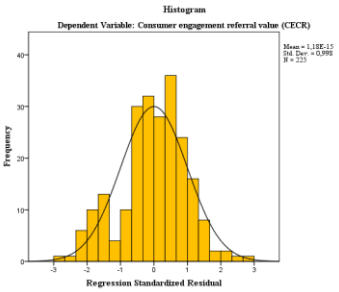
Table 4) Residuals Statistics

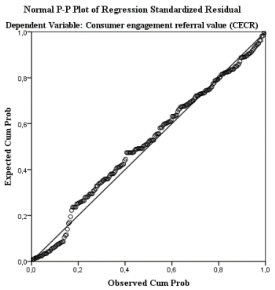
Residuals Statistics[a]

	Minimum	Maximum	**Mean**	Std. Deviation	N
Predicted Value	2.0840	4.1152	2.9311	.43162	225
Residual	-2.42456	2.63167	**.00000**	.90590	225
Std. Predicted Value	-1.963	2.743	.000	1.000	225
Std. Residual	-2.670	2.899	.000	.998	225

a. Dependent Variable: Consumer engagement referral value (CECR)

Charts





Scatterplot

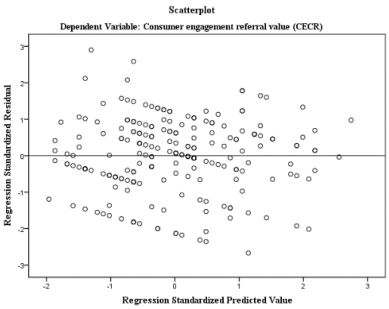


Table 5) Correlations

Correlations

		Brand Love (BL)	Unstandardized Residual
Brand Love (BL)	Pearson Correlation	1	
	Sig. (2-tailed)		
Unstandardized Residual	**Pearson Correlation**	**.000**	1
	Sig. (2-tailed)	1.000	

C.3. Influence value as dependent variable: Atmospherics in-flight characteristics

Model 1) Variables Entered/Removed

Variables Entered/Removed[a]

Model	Variables Entered	Variables Removed	Method
1	Classes on the plane (AL1,AL4), Overall layout (AL2, AL3, AL5), Food (AF), Odour (AO), Crew (AC), Temperature (AT), Noise (AN), Air Quality (AAQ)b		Enter

a. Dependent Variable: Consumer engagement influence value (CECI)
b. All requested variables entered.

Table 2) Model Summary

Model Summary[b]

Model	R	R Square	**Adjusted R Square**	Std. Error of the Estimate	**Durbin-Watson**
1	.448[a]	.201	**.171**	.74408	**1.848**

a. Predictors: (Constant), Classes on the plane (AL1,AL4), Overall layout (AL2, AL3, AL5), Food (AF), Odour (AO), Crew (AC), Temperature (AT), Noise (AN), Air Quality (AAQ)
b. Dependent Variable: Consumer engagement influence value (CECI)

Table 3) ANOVA

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	29.935	8	3.742	6.758	**.000**[b]
	Residual	119.036	215	.554		
	Total	148.971	223			

a. Dependent Variable: Consumer engagement influence value (CECI)
b. Predictors: (Constant), Classes on the plane (AL1,AL4), Overall layout (AL2, AL3, AL5), Food (AF), Odour (AO), Crew (AC), Temperature (AT), Noise (AN), Air Quality (AAQ)

Table 4) Coefficients

Coefficients[a]

Model		Unstandardized Coefficients		**Standardized Coefficients**	t	Sig.	Collinearity Statistics		**Adjusted R Square**
		B	Std. Error	**Beta**			Tolerance	VIF	
1	(Constant)	.600	.427		1.405	.162			
	Air Quality (AAQ)	.304	.114	.219	2.681	.008	.559	1.790	
	Temperature (AT)	.018	.085	.009	.116	.908	.601	1.665	
	Food (AF)	.042	.051	.054	.814	.416	.831	1.204	
	Crew (AC)	.229	.068	.235	3.347	**.001**	.755	1.324	17.10%
	Odour (AO)	-.095	.097	-.073	-0.973	.332	.658	1.519	
	Noise (AN)	.019	.072	.020	.264	.792	.623	1.606	
	Overall layout (AL2, AL3, AL5)	.108	.062	.142	1.736	.084	.559	1.790	
	Classes on the plane (AL1,AL4)	-.018	.047	-.025	-.382	.703	.838	1.193	

a. Dependent Variable: Consumer engagement influence value (CECI)

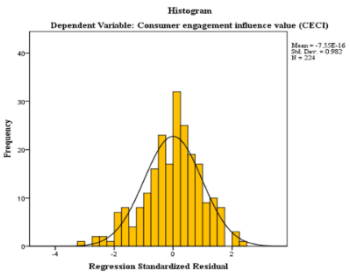
Table 4) Residuals Statistics

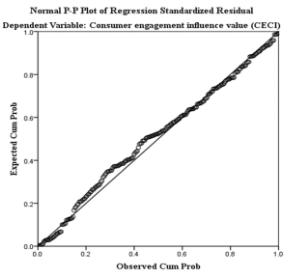
Residuals Statistics[a]

	Minimum	Maximum	**Mean**	Std. Deviation	N
Predicted Value	1.5119	3.8081	2.7891	.36638	224
Residual	-2.24116	1.81179	**.00000**	.73061	224
Std. Predicted Value	-3.486	2.781	.000	1.000	224
Std. Residual	-3.012	2.435	.000	.982	224

a. Dependent Variable: Consumer engagement influence value (CECI)

Charts





Scatterplot

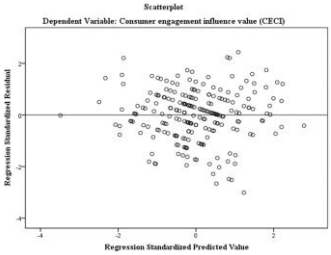


Table 5) Correlations

Correlations

		Air Quality (AAQ)	Temperature (AT)	Food (AF)	Crew (AC)	Odour (AO)	Noise (AN)	Overall layout (AL2, AL3, AL5)	Classes on the plane (AL1,AL4)	Unstandardized Residual
Air Quality (AAQ)	Pearson Correlation	1.000								
Temperature (AT)	Pearson Correlation	.549**	1.000							
	Sig. (2-tailed)	0.000								
Food (AF)	Pearson Correlation	0.047	.134*	1.000						
	Sig. (2-tailed)	0.483	0.045							
Crew (AC)	Pearson Correlation	.275**	.247**	-0.085	1.000					
	Sig. (2-tailed)	0.000	0.000	0.202						
Odour (AO)	Pearson Correlation	.482**	.457**	0.105	.301**	1.000				
	Sig. (2-tailed)	0.000	0.000	0.118	0.000					
Noise (AN)	Pearson Correlation	.429**	.374**	0.057	.375**	.419**	1.000			
	Sig. (2-tailed)	0.000	0.000	0.396	0.000	0.000				
Overall layout (AL2, AL3, AL5)	Pearson Correlation	.508**	.456**	-0.031	.437**	.348**	.514**	1.000		
	Sig. (2-tailed)	0.000	0.000	0.648	0.000	0.000	0.000			
Classes on the plane (AL1,AL4)	Pearson Correlation	-0.070	0.059	.345**	-0.041	-0.078	-0.125	-0.017	1.000	
	Sig. (2-tailed)	0.295	0.381	0.000	0.541	0.242	0.062	0.801		
Unstandardized Residual	Pearson Correlation	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	1.000
	Sig. (2-tailed)	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	

a. Correlation is significant at the 0.01 level (2-tailed)
b. Correlation is significant at the 0.05 level (2-tailed)

C.3. Influence value as dependent variable: Customer-to-customer interaction

Table 1) Variables Entered/Removed

Variables Entered/Removed[a]

Model	Variables Entered	Variables Removed	Method
1	Customer-to-customer interaction (C2C) [b]		Enter

a. Dependent Variable: Consumer engagement influence value (CECI)
b. All requested variables entered.

Table 2) Model Summary

Model Summary[b]

Model	R	R Square	**Adjusted R Square**	Std. Error of the Estimate
1	.225[a]	.050	**.046**	.80087

a. Predictors: (Constant), Customer-to-customer interaction (C2C)
b. Dependent Variable: Consumer engagement influence value (CECI)

Table 3) ANOVA

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	**Sig.**
1	Regression	7.595	1	7.595	11.842	**.001[b]**
	Residual	143.030	223	.641		
	Total	150.625	224			

a. Dependent Variable: Consumer engagement influence value (CECI)
b. Predictors: (Constant), Customer-to-customer interaction (C2C)

Table 4) Coefficients

Coefficients[a]

Model		Unstandardized Coefficients		**Standardized Coefficients**	t	**Sig.**	**Adjusted R Square**
		B	Std. Error	**Beta**			
1	(Constant)	2.228	.170		13.094	.000	4.60%
	Customer-to-customer interaction (C2C)	.242	.070	**.225**	3.441	**.001**	

a. Dependent Variable: Consumer engagement influence value (CECI)

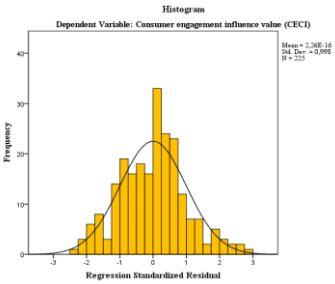
Ta3ble 4) Residuals Statistics

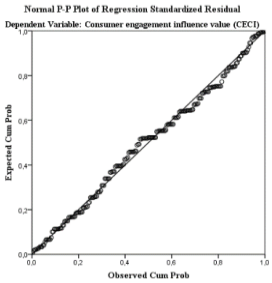
Residuals Statistics[a]

	Minimum	Maximum	**Mean**	Std. Deviation	N
Predicted Value	2.4698	3.1965	2.7833	.18414	225
Residual	-1.94650	2.21968	**.00000**	.79908	225
Std. Predicted Value	-1.703	2.244	.000	1.000	225
Std. Residual	-2.430	2.772	.000	.998	225

a. Dependent Variable: Consumer engagement influence value (CECI)

Charts





Scatterplot

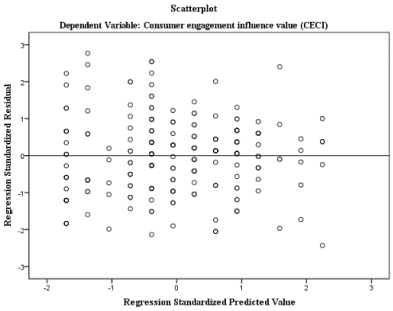


Table 5) Correlations

Correlations

		Customer-to-customer interaction (C2C)	Unstandardized Residual
Customer-to-customer interaction (C2C)	Pearson Correlation	1	
	Sig. (2-tailed)		
Unstandardized Residual	**Pearson Correlation**	**.000**	1
	Sig. (2-tailed)	1.000	

C.3. Influence value as dependent variable: Brand experience

Table 1) Variables Entered/Removed

Variables Entered/Removed[a]

Model	Variables Entered	Variables Removed	Method
1	Brand experience behavioural (BEB), brand experience sensory (BES), brand experience intellectual (BEI), brand experience affective (BEA)b		Enter

a. Dependent Variable: Consumer engagement influence value (CECI)

b. All requested variables entered.

Table 2) Model Summary

Model Summary[b]

Model	R	R Square	**Adjusted R Square**	Std. Error of the Estimate	**Durbin-Watson**
1	.644[a]	.415	**.404**	.63313	**1.860**

a. Predictors: (Constant), Brand experience behavioural (BEB), brand experience sensory (BES), brand experience intellectual (BEI), brand experience affective (BEA)

b. Dependent Variable: Consumer engagement influence value (CECI)

Table 3) ANOVA

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	62.437	4	15.609	38.940	**.000[b]**
	Residual	88.188	220	.401		
	Total	150.625	224			

a. Dependent Variable: Consumer engagement influence value (CECI)

b. Predictors: (Constant), Brand experience behavioural (BEB), brand experience sensory (BES), brand experience intellectual (BEI), brand experience affective (BEA)

Table 4) Coefficients

Coefficients[a]

Model			Unstandardized Coefficients		**Standardized Coefficients**	t	**Sig.**	Collinearity Statistics		**Adjusted R Square**
			B	Std. Error	**Beta**			Tolerance	VIF	
1	(Constant)		.505	.191		2.638	.009			
	Brand experience dimensionality	**Sensory**	.268	.077	**.277**	3.477	**.001**	.419	2.389	
		Affective	.028	.076	.031	.366	.715	.377	2.653	40.40%
		Intellectual	.131	.088	.113	1.479	.141	.456	2.194	
		Behavioural	.340	.084	**.315**	4.042	**.000**	.438	2.282	

a. Dependent Variable: Consumer engagement influence value (CECI)

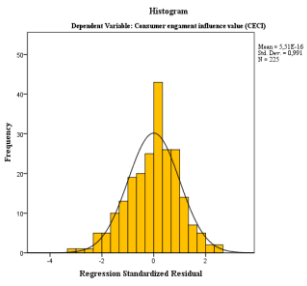
Table 4) Residuals Statistics

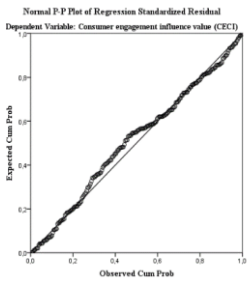
Residuals Statistics[a]

	Minimum	Maximum	**Mean**	Std. Deviation	N
Predicted Value	1.5879	4.1651	2.7833	.52795	225
Residual	-1.98621	1.66285	**.00000**	.62745	225
Std. Predicted Value	-2.264	2.617	.000	1.000	225
Std. Residual	-3.137	2.626	.000	.991	225

a. Dependent Variable: Consumer engagement influence value (CECI)

Charts





Scatterplot

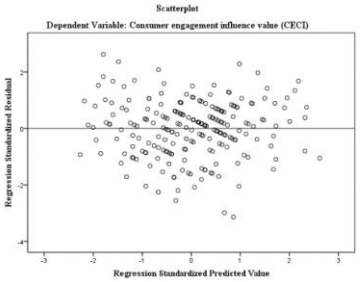


Table 5) Correlations

Correlations

		Sensory	Affective	Intellectual	Behavioural	Unstandardized Residual
Sensory	Pearson Correlation	1				
Affective	Pearson Correlation	.728[a]	1			
	Sig. (2-tailed)	.000				
Intellectual	Pearson Correlation	.627[a]	.639[a]	1		
	Sig. (2-tailed)	.000	.000			
Behavioural	Pearson Correlation	.615[a]	.671[a]	.676[a]	1	
	Sig. (2-tailed)	.000	.000	.000		
Unstandardized Residual	**Pearson Correlation**	**.000**	**.000**	**.000**	**.000**	1
	Sig. (2-tailed)	1.000	1.000	1.000	1.000	

a. Correlation is significant at the level 0.001 level (2-tailed)

C.3. Influence value as dependent variable: Brand Love

Table 1) Variables entered/removed

Variables Entered/Removed[a]

Model	Variables Entered	Variables Removed	Method
1	Brand Love (BL)[b]		Enter

a. Dependent Variable: Consumer engagement influence value (CECI)

b. All requested variables entered.

Table 2) Model Summary

Model Summary[b]

Model	R	R Square	**Adjusted R Square**	Std. Error of the Estimate
1	.587[a]	.344	**.341**	.66544

a. Predictors: (Constant), Brand Love (BL)

b. Dependent Variable: Consumer engagement influence value (CECI)

Table 3) ANOVA

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	**Sig.**
1	Regression	51.879	1	51.879	117.160	**.000**[b]
	Residual	98.746	223	.443		
	Total	150.625	224			

a. Dependent Variable: Consumer engagement influence value (CECI)

b. Predictors: (Constant), Brand Love (BL)

Table 4) Coefficients

Coefficients[a]

Model		Unstandardized Coefficients		**Standardized Coefficients**			**Adjusted R Square**
		B	Std. Error	**Beta**	t	**Sig.**	
1	(Constant)	1.159	.156		7.410	.000	34.10%
	Brand Love (BL)	.589	.054	**.587**	10.824	**.000**	

a. Dependent Variable: Consumer engagement influence value (CECI)

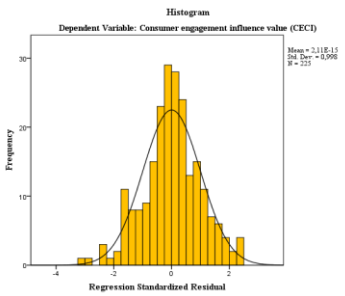
Table 4) Residuals Statistics

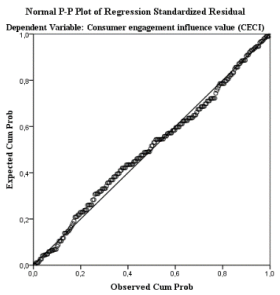
Residuals Statistics[a]

	Minimum	Maximum	**Mean**	Std. Deviation	N
Predicted Value	1.8388	4.1035	2.7833	.48125	225
Residual	-2.01645	1.61768	**.00000**	.66395	225
Std. Predicted Value	-1.963	2.743	.000	1.000	225
Std. Residual	-3.030	2.431	.000	.998	225

a. Dependent Variable: Consumer engagement influence value (CECI)

Charts





Scatterplot

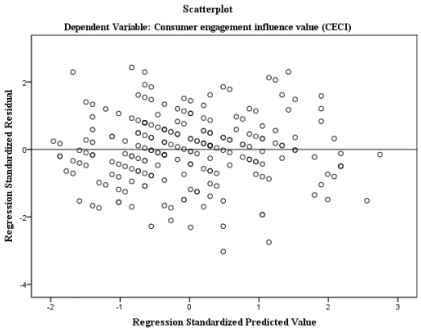


Table 5) Correlations

Correlations

		Brand Love (BL)	Unstandardized Residual
Brand Love (BL)	Pearson Correlation	1	
	Sig. (2-tailed)		
Unstandardized Residual	**Pearson Correlation**	**.000**	1
	Sig. (2-tailed)	1.000	

C.4. Knowledge value as dependent variable: Atmospherics in-flight characteristics

Model 1) Variables Entered/Removed

Variables Entered/Removed[a]

Model	Variables Entered	Variables Removed	Method
1	Classes on the plane (AL1,AL4), Overall layout (AL2, AL3, AL5), Food (AF), Odour (AO), Crew (AC), Temperature (AT), Noise (AN), Air Quality (AAQ)b		Enter

a. Dependent Variable: Consumer engagement knowledge value (CECK)

b. All requested variables entered.

Table 2) Model Summary

Model Summary[b]

Model	R	R Square	**Adjusted R Square**	Std. Error of the Estimate	**Durbin-Watson**
1	.369[a]	.136	**.104**	1.04701	**1.928**

a. Predictors: (Constant), Classes on the plane (AL1,AL4), Overall layout (AL2, AL3, AL5), Food (AF), Odour (AO), Crew (AC), Temperature (AT), Noise (AN), Air Quality (AAQ)

b. Dependent Variable: Consumer engagement knowledge value (CECK)

Table 3) ANOVA

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	37.093	8	4.637	4.230	.000[b]
	Residual	235.688	215	1.096		
	Total	272.781	223			

a. Dependent Variable: Consumer engagement knowledge value (CECK)

b. Predictors: (Constant), Classes on the plane (AL1,AL4), Overall layout (AL2, AL3, AL5), Food (AF), Odour (AO), Crew (AC), Temperature (AT), Noise (AN), Air Quality (AAQ)

Table 4) Coefficients

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics		Adjusted R Square
		B	Std. Error	Beta			Tolerance	VIF	
1	(Constant)	.220	.601		0.367	.714			
	Air Quality (AAQ)	.303	.160	.161	1.898	.059	.559	1.790	
	Temperature (AT)	.007	.119	.005	.058	.953	.601	1.665	
	Food (AF)	.123	.072	.119	1.707	.089	.831	1.204	
	Crew (AC)	.141	.096	.107	1.471	.143	.755	1.324	10.40%
	Odour (AO)	-.020	.137	-.011	-0.144	.886	.658	1.519	
	Noise (AN)	.000	.102	.000	-.005	.996	.623	1.606	
	Overall layout (AL2, AL3, AL5)	.183	.088	**.177**	2.084	**.038**	.559	1.790	
	Classes on the plane (AL1,AL4)	.024	.067	.025	.357	.721	.838	1.193	

a. Dependent Variable: Consumer engagement knowledge value (CECK)

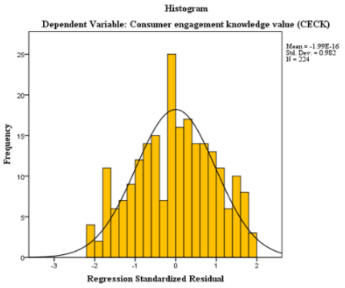
Table 4) Residuals Statistics

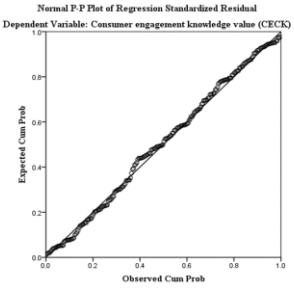
Residuals Statistics[a]

	Minimum	Maximum	**Mean**	Std. Deviation	N
Predicted Value	1.6437	4.0242	2.8292	.40784	224
Residual	-2.24552	2.08217	**.00000**	1.02805	224
Std. Predicted Value	-2.907	2.930	.000	1.000	224
Std. Residual	-2.145	1.989	.000	.982	224

a. Dependent Variable: Consumer engagement knowledge value (CECK)

Charts





Scatterplot

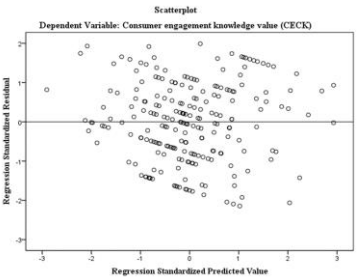


Table 5) Correlations

Correlations

		Air Quality (AAQ)	Temperature (AT)	Food (AF)	Crew (AC)	Odour (AO)	Noise (AN)	Overall layout (AL2, AL3, AL5)	Classes on the plane (AL1,AL4)	Unstandardized Residual
Air Quality (AAQ)	Pearson Correlation	1.000								
Temperature (AT)	Pearson Correlation	.549**	1.000							
	Sig. (2-tailed)	0.000								
Food (AF)	Pearson Correlation	0.047	.134*	1.000						
	Sig. (2-tailed)	0.483	0.045							
Crew (AC)	Pearson Correlation	.275**	.247**	-0.085	1.000					
	Sig. (2-tailed)	0.000	0.000	0.202						
Odour (AO)	Pearson Correlation	.482**	.457**	0.105	.301**	1.000				
	Sig. (2-tailed)	0.000	0.000	0.118	0.000					
Noise (AN)	Pearson Correlation	.429**	.374**	0.057	.375**	.419**	1.000			
	Sig. (2-tailed)	0.000	0.000	0.396	0.000	0.000				
Overall layout (AL2, AL3, AL5)	Pearson Correlation	.508**	.456**	-0.031	.437**	.348**	.514**	1.000		
	Sig. (2-tailed)	0.000	0.000	0.648	0.000	0.000	0.000			
Classes on the plane (AL1,AL4)	Pearson Correlation	-0.070	0.059	.345**	-0.041	-0.078	-0.125	-0.017	1.000	
	Sig. (2-tailed)	0.295	0.381	0.000	0.541	0.242	0.062	0.801		
Unstandardized Residual	Pearson Correlation	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	1.000
	Sig. (2-tailed)	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	

a. Correlation is significant at the 0.01 level (2-tailed)

b. Correlation is significant at the 0.05 level (2-tailed)

C.4. Knowledge value as dependent variable: Customer-to-customer interaction

Table 1) Variables Entered/Removed

Variables Entered/Removed[a]

Model	Variables Entered	Variables Removed	Method
1	Customer-to-customer interaction (C2C) [b]		Enter

a. Dependent Variable: Consumer engagement knowledge value (CECK)

b. All requested variables entered.

Table 2) Model Summary

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.254[a]	.064	**.060**	1.07367

a. Predictors: (Constant), Customer-to-customer interaction (C2C)

b. Dependent Variable: Consumer engagement knowledge value (CECK)

Table 3) ANOVA

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	17.723	1	17.723	15.374	**.000**[b]
	Residual	257.068	223	1.153		
	Total	274.791	224			

a. Dependent Variable: Consumer engagement knowledge value (CECK)

b. Predictors: (Constant), Customer-to-customer interaction (C2C)

Table 4) Coefficients

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics		Adjusted R Square
		B	Std. Error	Beta			Tolerance	VIF	
1	(Constant)	1.987	.228		8.711	**.000**			6.00%
	Customer-to-customer interaction (C2C)	.370	**.094**	0.254	**3.921**	0.000	1.000	1	

a. Dependent Variable: Consumer engagement knowledge value (CECK)

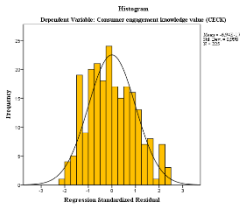
Table 4) Residuals Statistics

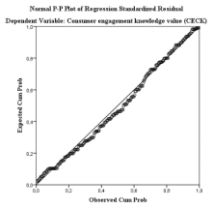
Residuals Statistics[a]

	Minimum	Maximum	**Mean**	Std. Deviation	N
Predicted Value	2.3566	3.4667	2.8356	.28128	225
Residual	-2.18915	2.64344	**.00000**	1.07127	225
Std. Predicted Value	-1.703	2.244	.000	1.000	225
Std. Residual	-2.039	2.462	.000	.998	225

a. Dependent Variable: Consumer engagement knowledge value (CECK)

Charts





Scatterplot

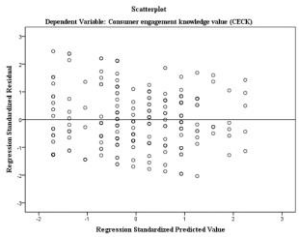


Table 5) Correlations

Correlations

		Unstandardized Residual	Customer-to-customer interaction (C2C)
Unstandardized Residual	Pearson Correlation	1	
	Sig. (2-tailed)		
Customer-to-customer interaction (C2C)	**Pearson Correlation**	**.000**	1
	Sig. (2-tailed)	1.000	

C.4. Knowledge value as dependent variable: Brand experience

Table 1) Variables Entered/Removed

Variables Entered/Removed[a]

Model	Variables Entered	Variables Removed	Method
1	Brand experience behavioural (BEB), brand experience sensory (BES), brand experience intellectual (BEI), brand experience affective (BEA) [b]		Enter

a. Dependent Variable: Consumer engagement knowledge value (CECK)

b. All requested variables entered.

Table 2) Model Summary

Model Summary[b]

Model	R	R Square	**Adjusted R Square**	Std. Error of the Estimate	**Durbin-Watson**
1	,521[a]	.271	**.258**	.95413	**2.003**

a. Predictors: (Constant), Brand experience behavioural (BEB), brand experience sensory (BES), brand experience intellectual (BEI), brand experience affective (BEA)

b. Dependent Variable: Consumer engagement knowledge value (CECK)

Table 3) ANOVA

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	**Sig.**
1	Regression	74.510	4	18.627	20.462	**,000[b]**
	Residual	200.281	220	.910		
	Total	274.791	224			

a. Dependent Variable: Consumer engagement knowledge value (CECK)

b. Predictors: (Constant), Brand experience behavioural (BEB), brand experience sensory (BES), brand experience intellectual (BEI), brand experience affective (BEA)

Table 4) Coefficients

Coefficients[a]

Model			Unstandardized Coefficients		**Standardized Coefficients**	t	**Sig.**	Collinearity Statistics		**Adjusted R Square**
			B	Std. Error	**Beta**			Tolerance	VIF	
1	(Constant)		.418	.288		1.448	.149			25.80%
	Brand experience dimensionality	**Sensory**	.258	.116	**.198**	2.221	**.027**	.419	2.389	
		Affective	-.314	.115	-.257	-2.741	.007	.377	2.653	
		Intellectual	.525	.133	**.336**	3.941	**.000**	.456	2.194	
		Behavioural	.371	.127	.254	2.926	.004	.438	2.282	

a. Dependent Variable: Consumer engagement knowledge value (CECK)

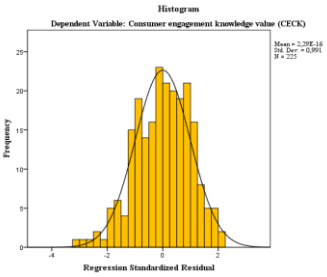
Table 4) Residuals Statistics

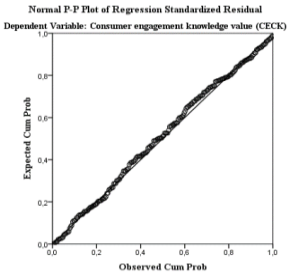
Residuals Statistics[a]

	Minimum	Maximum	**Mean**	Std. Deviation	N
Predicted Value	1.4145	4.3529	2.8356	.57674	225
Residual	-2.88211	2.11220	**.00000**	.94557	225
Std. Predicted Value	-2.464	2.631	.000	1.000	225
Std. Residual	-3.021	2.214	.000	.991	225

a. Dependent Variable: Consumer engagement knowledge value (CECK)

Charts





Scatterplot

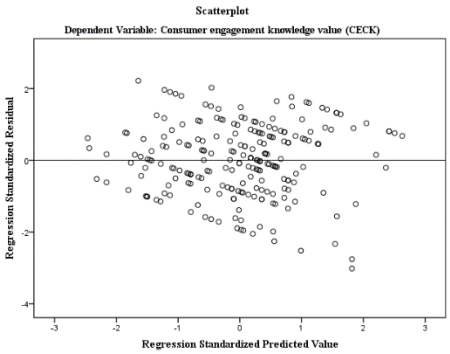


Table 5) Correlations

Correlations

			Brand experience dimensionality				Unstandardized Residual
			Sensory	Affective	Intellectual	Behavioural	
Brand experience dimensionality	Sensory	Pearson Correlation	1				
	Affective	Pearson Correlation	0.728[a]	1			
		Sig. (2-tailed)	.000				
	Intellectual	Pearson Correlation	0.627[a]	0.639[a]	1		
		Sig. (2-tailed)	.000	.000			
	Behavioural	Pearson Correlation	0.615[a]	0.671[a]	0.676[a]	1	
		Sig. (2-tailed)	.000	.000	.000		
Unstandardized Residual		**Pearson Correlation**	**.000**	**.000**	**.000**	**.000**	1
		Sig. (2-tailed)	1.000	1.000	1.000	1.000	

a. Correlation is significant at the level 0.001 level (2-tailed)

C.4. Knowledge value as dependent variable: Brand love

Table 1) Variables entered/removed

Variables Entered/Removed[a]

Model	Variables Entered	Variables Removed	Method
1	Brand Love (BL)[b]		Enter

a. Dependent Variable: Consumer engagement knowledge value (CECK)
b. All requested variables entered.

Table 2) Model Summary

Model Summary[b]

Model	R	R Square	**Adjusted R Square**	Std. Error of the Estimate
1	.460[a]	.212	**.208**	.98564

a. Predictors: (Constant), Brand Love (BL)
b. Dependent Variable: Consumer engagement knowledge value (CECK)

Table 3) ANOVA

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	58.148	1	58.148	59.854	**.000[b]**
	Residual	216.643	223	.971		
	Total	274.791	224			

a. Dependent Variable: Consumer engagement knowledge value (CECK)

b. Predictors: (Constant), Brand Love (BL)

Table 4) Coefficients

Coefficients[a]

Model		Unstandardized Coefficients		**Standardized Coefficients**			**Adjusted R Square**
		B	Std. Error	**Beta**	t	**Sig.**	
1	(Constant)	1.116	.232		4.817	.000	20.80%
	Brand Love (BL)	.623	.081	**.460**	7.737	**.000**	

a. Dependent Variable: Consumer engagement knowledge value (CECK)

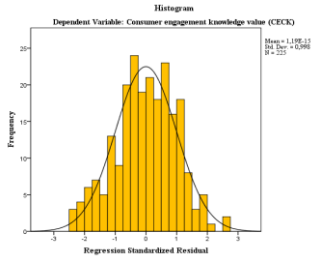
Table 4) Residuals Statistics

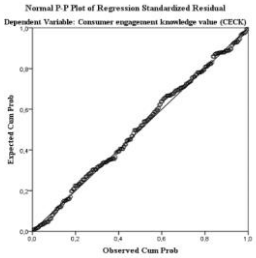
Residuals Statistics[a]

	Minimum	Maximum	**Mean**	Std. Deviation	N
Predicted Value	1.8356	4.2333	2.8356	.50950	225
Residual	-2.37008	2.52058	**.00000**	.98344	225
Std. Predicted Value	-1.963	2.743	.000	1.000	225
Std. Residual	-2.405	2.557	.000	.998	225

a. Dependent Variable: Consumer engagement knowledge value (CECK)

Charts





Scatterplot

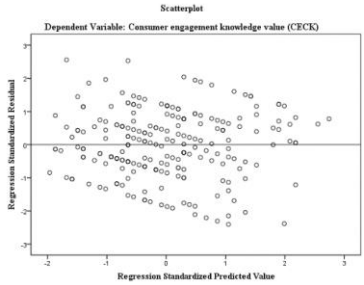


Table 5) Correlations

Correlations

		Brand Love (BL)	Unstandardized Residual
Brand Love (BL)	Pearson Correlation	1	
	Sig. (2-tailed)		
Unstandardized Residual	**Pearson Correlation**	**.000**	1
	Sig. (2-tailed)	1.000	

C.5. Meaningfulness as dependent variable: Consumer engagement

Table 1) Variables entered/removed

Variables Entered/Removed[a]

Model	Variables Entered	Variables Removed	Method
1	Consumer engagement knowledge value (CECK), Consumer engagement lifetime value (CECL), Consumer engagement referral value (CECR), Consumer engagement influence value (CECI)[b]		Enter

a. Dependent Variable: Co-creation meaningfulness (CCM)

b. All requested variables entered.

Table 2) Model Summary

Model Summary[b]

Model	R	R Square	**Adjusted R Square**	Std. Error of the Estimate	**Durbin-Watson**
1	.698[a]	.487	**.477**	.62836	**2.244**

a. Predictors: (Constant), Consumer engagement knowledge value (CECK), Consumer engagement lifetime value (CECL), Consumer engagement referral value (CECR), Consumer engagement influence value (CECI)

b. Dependent Variable: Co-creation meaningfulness (CCM)

Table 3) ANOVA

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	**Sig.**
1	Regression	82.399	4	20.600	52.173	**.000**[b]
	Residual	86.863	220	.395		
	Total	169.262	224			

a. Dependent Variable: Co-creation meaningfulness (CCM)

b. Predictors: (Constant), Consumer engagement knowledge value (CECK), Consumer engagement lifetime value (CECL), Consumer engagement referral value (CECR), Consumer engagement influence value (CECI)

Table 4) Coefficients

Coefficients[a]

Model		Unstandardized Coefficients		**Standardized Coefficients**	t	**Sig.**	Collinearity Statistics		**Adjusted R Square**
		B	Std. Error	Beta			Tolerance	VIF	
1	(Constant)	-.053	.194		-.275	.784			
	Consumer engagement lifetime value (CECL)	.350	.057	**.357**	6.186	**.000**	.699	1.431	
	Consumer engagement influence value (CECI)	.255	.071	**.241**	3.602	**.000**	.523	1.912	**47.70%**
	Consumer engagement referral value (CECR)	.076	.049	.088	1.562	.120	.738	1.355	
	Consumer engagement knowledge value (CECK)	.182	.048	**.232**	3.815	**.000**	.632	1.583	

a. Dependent Variable: Co-creation meaningfulness (CCM)

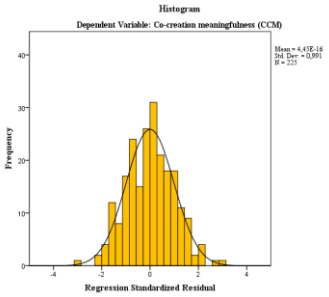
Table 4) Residuals Statistics

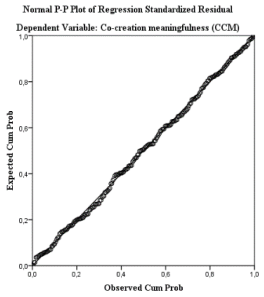
Residuals Statistics[a]

	Minimum	Maximum	**Mean**	Std. Deviation	N
Predicted Value	1.0862	4.1223	2.6311	.60651	225
Residual	-1.93106	1.89446	**.00000**	.62272	225
Std. Predicted Value	-2.547	2.459	.000	1.000	225
Std. Residual	-3.073	3.015	.000	.991	225

a. Dependent Variable: Co-creation meaningfulness (CCM)

Charts





Scatterplot

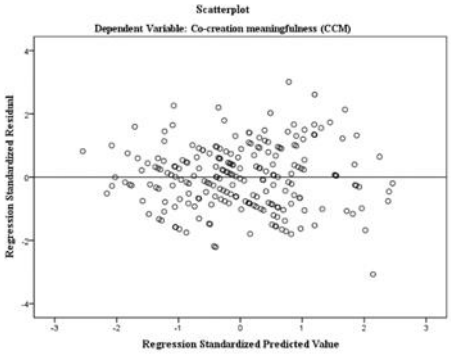


Table 5) Correlations

Correlations

		Unstandardized Residual	Consumer engagement lifetime value (CECL)	Consumer engagement influence value (CECI)	Consumer engagement referral value (CECR)	Consumer engagement knowledge value (CECK)
Unstandardized Residual	Pearson Correlation	1				
Consumer engagement lifetime value (CECL)	Pearson Correlation	**.000**	1			
	Sig. (2-tailed)	1.000				
Consumer engagement influence value (CECI)	Pearson Correlation	**.000**	.458[a]	1		
	Sig. (2-tailed)	1.000	.000			
Consumer engagement referral value (CECR)	Pearson Correlation	**.000**	.448[a]	.403[a]	1	
	Sig. (2-tailed)	1.000	.000	.000		
Consumer engagement knowledge value (CECK)	Pearson Correlation	**.000**	.221	.596[a]	.311[a]	1
	Sig. (2-tailed)	1.000	.001	.000	.000	

a. Correlation is significant at the level 0.001 level (2-tailed)

C.5. Collaboration as dependent variable: Consumer engagement

Table 1) Variables entered/removed

Variables Entered/Removed[a]

Model	Variables Entered	Variables Removed	Method
1	Consumer engagement knowledge value (CECK), Consumer engagement lifetime value (CECL), Consumer engagement referral value (CECR), Consumer engagement influence value (CECI)b		Enter

a. Dependent Variable: Co-creation collaboration (CCC)
b. All requested variables entered.

Table 2) Model Summary

Model Summary[b]

Model	R	R Square	**Adjusted R Square**	Std. Error of the Estimate	**Durbin-Watson**
1	.691[a]	.477	**.468**	.59569	**2.157**

a. Predictors: (Constant), Consumer engagement knowledge value (CECK), Consumer engagement lifetime value (CECL), Consumer engagement referral value (CECR), Consumer engagement influence value
b. Dependent Variable: Co-creation collaboration (CCC)

Table 3) ANOVA

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	71.249	4	17.812	50.198	**.000**[b]
	Residual	78.065	220	.355		
	Total	149.314	224			

a. Dependent Variable: Co-creation collaboration (CCC)
b. Predictors: (Constant), Consumer engagement knowledge value (CECK), Consumer engagement lifetime value (CECL), Consumer engagement referral value (CECR), Consumer engagement influence value (CECI)

Table 4) Coefficients

Coefficients[a]

Model		Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	**Coefficients Beta**	t	**Sig.**	Collinearity Statistics Tolerance	Collinearity Statistics VIF	**Adjusted R Square**
1	(Constant)	.547	.184		2.978	.003			
	Consumer engagement lifetime value (CECL)	.482	.054	**.524**	8.986	**.000**	.699	1.431	
	Consumer engagement influence value (CECI)	.212	.067	**.213**	3.164	**.002**	.523	1.912	46.80%
	Consumer engagement referral value (CECR)	-.016	.046	-.019	-.342	.733	.738	1.355	
	Consumer engagement knowledge value (CECK)	.084	.045	.114	1.853	.065	.632	1.583	

a. Dependent Variable: Co-creation collaboration (CCC)

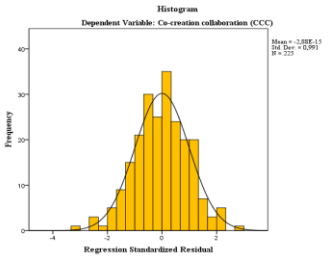
Table 4) Residuals Statistics

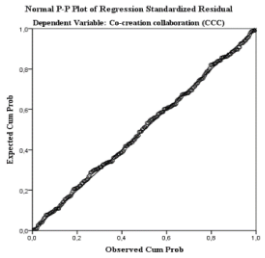
Residuals Statistics[a]

	Minimum	Maximum	**Mean**	Std. Deviation	N
Predicted Value	1.4090	4.3208	3.0302	.56398	225
Residual	-1.80033	1.59473	**.00000**	.59034	225
Std. Predicted Value	-2.875	2.288	.000	1.000	225
Std. Residual	-3.022	2.677	.000	.991	225

a. Dependent Variable: Co-creation collaboration (CCC)

Charts





Scatterplot

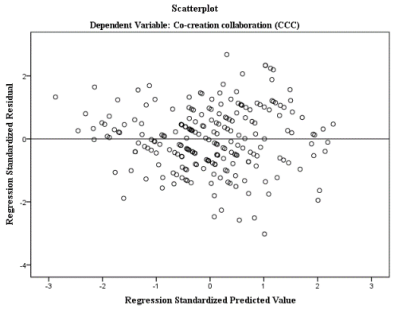


Table 5) Correlations

Correlations

			Consumer engagement				Unstandardized Residual
			Lifetime value (CECL)	Influence value (CECI)	Referral value (CECR)	Knowledge value (CECK)	
Consumer engagement	Lifetime value (CECL)	Pearson Correlation	1.000				
	Influence value (CECI)	Pearson Correlation	.458[a]	1.000			
		Sig. (2-tailed)	0.000				
	Referral value (CECR)	Pearson Correlation	.448[a]	.403[a]	1.000		
		Sig. (2-tailed)	0.000	0.000			
	Knowledge value (CECK)	Pearson Correlation	.221[a]	.596[a]	.311[a]	1.000	
		Sig. (2-tailed)	0.001	0.000	0.000		
	Unstandardized Residual	**Pearson Correlation**	**0.000**	**0.000**	**0.000**	**0.000**	1.000
		Sig. (2-tailed)	1.000	1.000	1.000	1.000	

a. Correlation is significant at the level 0.001 level (2-tailed)

C.5. Contribution as dependent variable: Consumer engagement

Table 1) Variables entered/removed

Variables Entered/Removed

Model	Variables Entered	Variables Removed	Method
1	Consumer engagement knowledge value (CECK), Consumer engagement lifetime value (CECL), Consumer engagement referral value (CECR), Consumer engagement influence value (CECI) [b]		Enter

a. Dependent Variable: Co-creation contribution (CCCon)

b. All requested variables entered.

Table 2) Model Summary

Model Summary[b]

Model	R	R Square	**Adjusted R Square**	Std. Error of the Estimate	**Durbin-Watson**
1	.580[a]	.336	**.324**	.72380	**2.061**

a. Predictors: (Constant), Consumer engagement knowledge value (CECK), Consumer engagement lifetime value (CECL), Consumer engagement referral value (CECR), Consumer engagement influence value

b. Dependent Variable: Co-creation contribution (CCCon)

Table 3) ANOVA

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	**Sig.**
1	Regression	58.407	4	14.602	27.872	**.000[b]**
	Residual	115.254	220	.524		
	Total	173.661	224			

a. Dependent Variable: Co-creation contribution (CCCon)

b. Predictors: (Constant), Consumer engagement knowledge value (CECK), Consumer engagement lifetime value (CECL), Consumer engagement referral value (CECR), Consumer engagement influence value (CECI)

Table 4) Coefficients

Coefficients[a]

Model		Unstandardized Coefficients		**Standardized Coefficients**	t	**Sig.**	Collinearity Statistics		**Adjusted R Square**
		B	Std. Error	**Beta**			Tolerance	VIF	
1	(Constant)	.836	.223		3.749	.000			
	Consumer engagement lifetime value (CECL)	.240	.065	**.242**	3.678	**.000**	.699	1.431	
	Consumer engagement influence value (CECI)	.251	.082	**.234**	3.078	**.002**	.523	1.912	32.40%
	Consumer engagement referral value (CECR)	.052	.056	.059	.929	.354	.738	1.355	
	Consumer engagement knowledge value (CECK)	.177	.055	**.223**	3.226	**.001**	.632	1.583	

a. Dependent Variable: Co-creation contribution (CCCon)

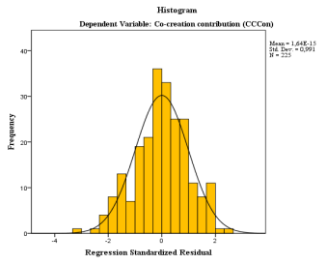
Table 4) Residuals Statistics

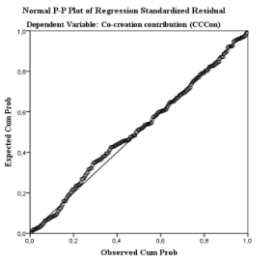
Residuals Statistics[a]

	Minimum	Maximum	**Mean**	Std. Deviation	N
Predicted Value	1.8041	4.3219	3.0364	.51063	225
Residual	-2.30946	1.70665	**.00000**	.71730	225
Std. Predicted Value	-2.413	2.517	.000	1.000	225
Std. Residual	-3.191	2.358	.000	.991	225

a. Dependent Variable: Co-creation contribution (CCCon)

Charts





Scatterplot

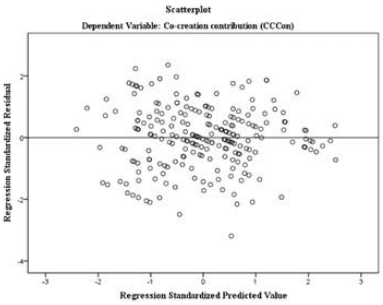


Table 5) Correlations

Correlations

			Consumer engagement				Unstandardized Residual
			Lifetime value (CECL)	Influence value (CECI)	Referral value (CECR)	Knowledge value (CECK)	
Consumer engagement	Lifetime value (CECL)	Pearson Correlation	1.000				
	Influence value (CECI)	Pearson Correlation	.458[a]	1.000			
		Sig. (2-tailed)	0.000				
	Referral value (CECR)	Pearson Correlation	.448[a]	.403[a]	1.000		
		Sig. (2-tailed)	0.000	0.000			
	Knowledge value (CECK)	Pearson Correlation	.221[a]	.596[a]	.311[a]	1.000	
		Sig. (2-tailed)	0.001	0.000	0.000		
	Unstandardized Residual	**Pearson Correlation**	**0.000**	**0.000**	**0.000**	**0.000**	1.000
		Sig. (2-tailed)	1.000	1.000	1.000	1.000	

a. Correlation is significant at the level 0.001 level (2-tailed)

C.5. Recognition as dependent variable: Consumer engagement

Table 1) Variables entered/removed

Variables Entered/Removed[a]

Model	Variables Entered	Variables Removed	Method
1	Consumer engagement knowledge value (CECK), Consumer engagement lifetime value (CECL), Consumer engagement referral value (CECR), Consumer engagement influence value (CECI)[b]		Enter

a. Dependent Variable: Co-creation recognition (CCR)

b. All requested variables entered.

Table 2) Model Summary

Model Summary[b]

Model	R	R Square	**Adjusted R Square**	Std. Error of the Estimate	**Durbin-Watson**
1	.486[a]	.236	**.222**	.84071	**1.973**

a. Predictors: (Constant), Consumer engagement knowledge value (CECK), Consumer engagement lifetime value (CECL), Consumer engagement referral value (CECR), Consumer engagement influence value

b. Dependent Variable: Co-creation recognition (CCR)

Table 3) ANOVA

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	48.061	4	12.015	17.000	**.000**[b]
	Residual	155.493	220	.707		
	Total	203.554	224			

a. Dependent Variable: Co-creation recognition (CCR)

b. Predictors: (Constant), Consumer engagement knowledge value (CECK), Consumer engagement lifetime value (CECL), Consumer engagement referral value (CECR), Consumer engagement influence value (CECI)

Table 4) Coefficients

Coefficients[a]

Model		Unstandardized Coefficients		**Standardized Coefficients**	t	**Sig.**	Collinearity Statistics		**Adjusted R Square**
		B	Std. Error	**Beta**			Tolerance	VIF	
1	(Constant)	.966	.259		3.728	.000			
	Consumer engagement lifetime value (CECL)	.238	.076	**.221**	3.142	**.002**	.699	1.431	
	Consumer engagement influence value (CECI)	.264	.095	.227	2.783	.006	.523	1.912	22.22%
	Consumer engagement referral value (CECR)	.089	.065	.094	1.366	.173	.738	1.355	
	Consumer engagement knowledge value (CECK)	.076	.064	.088	1.183	.238	.632	1.583	

a. Dependent Variable: Co-creation recognition (CCR)

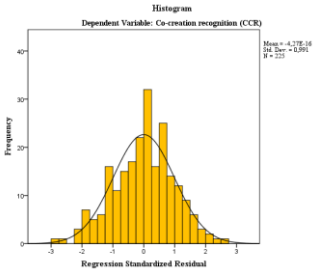
Table 4) Residuals Statistics

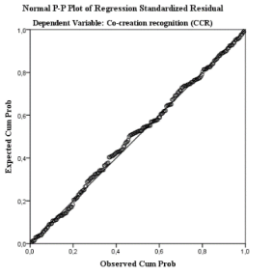
Residuals Statistics[a]

	Minimum	Maximum	**Mean**	Std. Deviation	N
Predicted Value	1.8434	4.1769	3.0142	.46320	225
Residual	-2.36448	2.22834	**.00000**	.83317	225
Std. Predicted Value	-2.528	2.510	.000	1.000	225
Std. Residual	-2.812	2.651	.000	.991	225

a. Dependent Variable: Co-creation recognition (CCR)

Charts





Scatterplot

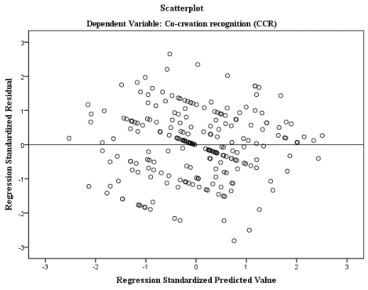


Table 5) Correlations

Correlations

			Consumer engagement				Unstandardized Residual
			Lifetime value (CECL)	Influence value (CECI)	Referral value (CECR)	Knowledge value (CECK)	
Consumer engagement	Lifetime value (CECL)	Pearson Correlation	1.000				
	Influence value (CECI)	Pearson Correlation	.458[a]	1.000			
		Sig. (2-tailed)	0.000				
	Referral value (CECR)	Pearson Correlation	.448[a]	.403[a]	1.000		
		Sig. (2-tailed)	0.000	0.000			
	Knowledge value (CECK)	Pearson Correlation	.221[a]	.596[a]	.311[a]	1.000	
		Sig. (2-tailed)	0.001	0.000	0.000		
	Unstandardized Residual	**Pearson Correlation**	**0.000**	**0.000**	**0.000**	**0.000**	1.000
		Sig. (2-tailed)	1.000	1.000	1.000	1.000	

a. Correlation is significant at the level 0.001 level (2-tailed)

C.5. Affective response as dependent variable: Consumer engagement

Table 1) Variables entered/removed

Variables Entered/Removed[a]

Model	Variables Entered	Variables Removed	Method
1	Consumer engagement knowledge value (CECK), Consumer engagement lifetime value (CECL), Consumer engagement referral value (CECR), Consumer engagement influence value (CECI) [b]		Enter

a. Dependent Variable: Co-creation affective response (CCA)
b. All requested variables entered.

Table 2) Model Summary

Model Summary[b]

Model	R	R Square	**Adjusted R Square**	Std. Error of the Estimate	**Durbin-Watson**
1	.613[a]	.376	**.364**	.78039	**1.968**

a. Predictors: (Constant), Consumer engagement knowledge value (CECK), Consumer engagement lifetime value (CECL), Consumer engagement referral value (CECR), Consumer engagement influence value (CECI)
b. Dependent Variable: Co-creation affective response (CCA)

Table 3) ANOVA

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	**Sig.**
1	Regression	80.609	4	20.152	33.091	**.000[b]**
	Residual	133.980	220	.609		
	Total	214.589	224			

a. Dependent Variable: Co-creation affective response (CCA)
b. Predictors: (Constant), Consumer engagement knowledge value (CECK), Consumer engagement lifetime value (CECL), Consumer engagement referral value (CECR), Consumer engagement influence value (CECI)

Table 4) Coefficients

Coefficients[a]

Model		Unstandardized Coefficients		**Standardized Coefficients**	t	**Sig.**	Collinearity Statistics		**Adjusted R Square**
		B	Std. Error	**Beta**			Tolerance	VIF	
1	(Constant)	.574	.240		2.389	.018			
	Consumer engagement lifetime value (CECL)	.515	.070	**.467**	7.335	**.000**	.699	1.431	
	Consumer engagement influence value (CECI)	.102	.088	.085	1.161	.247	.523	1.912	36.40%
	Consumer engagement referral value (CECR)	.012	.060	.013	.202	.840	.738	1.355	
	Consumer engagement knowledge value (CECK)	.181	.059	**.205**	3.059	**.003**	.632	1.583	

a. Dependent Variable: Co-creation affective response (CCA)

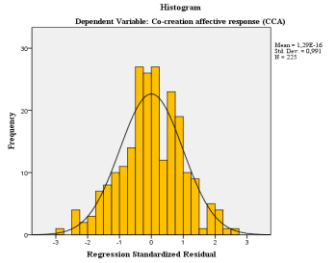
Table 4) Residuals Statistics

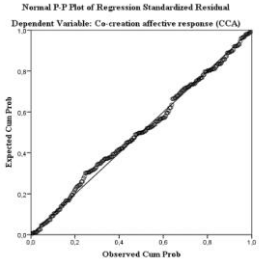
Residuals Statistics[a]

	Minimum	Maximum	**Mean**	Std. Deviation	N
Predicted Value	1.5590	4.5912	3.2276	.59988	225
Residual	-2.15970	2.00296	**.00000**	.77339	225
Std. Predicted Value	-2.782	2.273	.000	1.000	225
Std. Residual	-2.767	2.567	.000	.991	225

a. Dependent Variable: Co-creation affective response (CCA)

Charts





Scatterplot

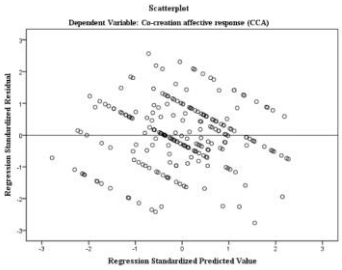


Table 5) Correlations

Correlations

			Consumer engagement				Unstandardized Residual
			Lifetime value (CECL)	Influence value (CECI)	Referral value (CECR)	Knowledge value (CECK)	
Consumer engagement	Lifetime value (CECL)	Pearson Correlation	1.000				
	Influence value (CECI)	Pearson Correlation	.458[a]	1.000			
		Sig. (2-tailed)	0.000				
	Referral value (CECR)	Pearson Correlation	.448[a]	.403[a]	1.000		
		Sig. (2-tailed)	0.000	0.000			
	Knowledge value (CECK)	Pearson Correlation	.221[a]	.596[a]	.311[a]	1.000	
		Sig. (2-tailed)	0.001	0.000	0.000		
	Unstandardized Residual	**Pearson Correlation**	**0.000**	**0.000**	**0.000**	**0.000**	1.000
		Sig. (2-tailed)	1.000	1.000	1.000	1.000	

a. Correlation is significant at the level 0.001 level (2-tailed)

D. Mediation Analysis								
Path								
1. Independent	2. Independent	Dependent	Pearson Correlation	Adjusted R square	1)Sig	1) Standardized Beta	2) Sig	2) Standardized Beta
Air Quality (AAQ)	-	Recognition (CCR)	Verified	4.50%	0.001	0.221		
Air Quality (AAQ)	Lifetime value (CECL)	Recognition (CCR)	Verified	15.30%	**0.089**	**0.111**	0	0.352
Air Quality (AAQ)	Influential value (CECI)	Recognition (CCR)	verified	17.50%	**0.159**	**0.091**	0	0.388
Temperature (AT)	-	Contribution (CCCon)	Verified	4.40%	0.001	0.22		
Temperature (AT)	Influential value (CECI)	Contribution (CCCon)	Verified	25.60%	**0.063**	**0.111**	0	0.476
Temperature (AT)	-	Recognition (CCR)	Verified	1.70%	0.028	0.147		
Temperature (AT)	Lifetime value (CECL)	Recognition (CCR)	Verified	10.46%	**0.298**	**0.066**	0	0.372
Temperature (AT)	Referral value (CECR)	Recognition (CCR)	verified	10.00%	**0.096**	**0.107**	0	0.297
Temperature (AT)	Influential value (CECI)	Recognition (CCR)	Verified	17.00%	**0.393**	**0.054**	0	0.406
Temperature (AT)	Knowledge value (CECK)	Recognition (CCR)	verified	9.00%	**0.188**	**0.086**	0	0.282
Temperature (AT)	-	Affective Response (CCA)	Verified	3.40%	0.003	0.195		
Temperature (AT)	Lifetime value (CECL)	Affective Response (CCA)	Verified	31.00%	**0.177**	**0.077**	0	0.541
Temperature (AT)	Influential value (CECI)	Affective Response (CCA)	verified	18.50%	**0.102**	**0.102**	0	0.403
Temperature (AT)	Knowledge value (CECK)	Affective Response (CCA)	Verified	13.80%	**0.056**	**0.122**	0	0.337

Odour (AO)	-	Contribution (CCCon)	Verified	1.40%	0.044	0.135		
Odour (AO)	Lifetime value (CECL)	Contribution (CCCon)	Verified	1.87%	**0.323**	**0.061**	0	0.426
Odour (AO)	Referral value (CECR)	Contribution (CCCon)	verified	11.50%	**0.157**	**0.09**	0	0.326
Odour (AO)	Influential value (CECI)	Contribution (CCCon)	Verified	2.50%	**0.413**	**0.048**	0	0.501
Odour (AO)	Knowledge value (CECK)	Contribution (CCCon)	verified	18.30%	**0.315**	**0.062**	0	0.422
Odour (AO)	-	Collaboration (CCC)	Verified	5.20%	0	0.238		
Odour (AO)	Influential value (CECI)	Collaboration (CCC)	Verified	2.77%	**0.08**	**0.154**	0	0.484
Odour (AO)	-	Affective Response (CCA)	Verified	1.40%	0.04	0.137		
Odour (AO)	Lifetime value (CECL)	Affective Response (CCA)	Verified	31.10%	**0.468**	**0.041**	0	0.555
Odour (AO)	Referral value (CECR)	Affective Response (CCA)	verified	10.40%	**0.137**	**0.096**	0	0.307
Odour (AO)	Influential value (CECI)	Affective Response (CCA)	Verified	18.00%	**0.29**	**0.065**	0	0.416
Odour (AO)	Knowledge value (CECK)	Affective Response (CCA)	verified	13.20%	**0.229**	**0.076**	0	0.353
Crew (AC)	-	Contribution (CCCon)	Verified	10.10%	0	0.323		
Crew (AC)	Lifetime value (CECL)	Contribution (CCCon)	Verified	18.60%	**0.061**	**0.134**	0	0.353
C2C	-	Contribution (CCCon)	Verified	2.30%	0.013	0.165		
C2C	Referral value (CECR)	Contribution (CCCon)	Verified	10.90%	**0.178**	**0.088**	0	0.309

C2C	-	Recognition (CCR)	Verified	3.00%	0.005	0.185	-	-
C2C	Referral value (CECR)	Recognition (CCR)	Verified	10.10%	**0.082**	**0.114**	0	0.283
C2C	Influential value (CECI)	Recognition (CCR)	verified	17.60%	**0.127**	**0.095**	0	0.397
C2C	Knowledge value (CECK)	Recognition (CCR)	Verified	9.50%	**0.08**	**0.116**	0	0.272
C2C	-	Affective Response (CCA)	Verified	3.20%	0.004	0.189	-	-
C2C	Referral value (CECR)	Affective Response (CCA)	Verified	10.70%	**0.074**	**0.117**	0	0.291
C2C	Influential value (CECI)	Affective Response (CCA)	verified	18.40%	**0.113**	**0.099**	0	0.405
C2C	Knowledge value (CECK)	Affective Response (CCA)	Verified	13.40%	**0.107**	**0.104**	0	0.337

Path 1) Air Quality (AAQ) – Recognition (CCR)

Table 1) Model Summary

Model Summary[b]

Model	R	R Square	**Adjusted R Square**	Std. Error of the	Durbin-Watson
1	.221[a]	.049	**.045**	.93175	2.005

a. Predictors: (Constant), Air Quality (AAQ)
b. Dependent Variable: Recognition (CCR)

Table 2) ANOVA

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	9.955	1	9.955	11.467	**.001**[b]
	Residual	193.599	223	.868		
	Total	203.554	224			

a. Dependent Variable: Recognition (CCR)
b. Predictors: (Constant), Air Quality (AAQ)

Table 3) Coefficients

Coefficients[a]

Model		Unstandardized Coefficients		**Standardized**	t	Sig.
		B	Std. Error	**Beta**		
1	(Constant)	1.688	.396		4.258	.000
	Air Quality (AAQ)	.360	.106	.221	3.386	.001

a. Dependent Variable: Recognition (CCCR)

Path 2) Air Quality (AAQ) – Lifetime value (CECL) - Recognition (CCR)

Table 1) Correlations

Correlations

		Air Quality (AAQ)	Recognition	Lifetime value (CECL)
Air Quality (AAQ)	Pearson Correlation	1.000	.221**	.314**
	Sig. (2-tailed)		0.001	0.000
	N	225.000	225.000	225.000
Recognition (CCR)	Pearson Correlation	.221**	1.000	.387**
	Sig. (2-tailed)	0.001		0.000
	N	225.000	225.000	225.000
Lifetime value (CECL)	Pearson Correlation	.314**	.387**	1.000
	Sig. (2-tailed)	0.000	0.000	
	N	225.000	225.000	225.000

**. Correlation is significant at the 0.01 level (2-tailed).

Table 2) Model Summary

Model Summary[b]

Model	R	R Square	**Adjusted R**	Std. Error of the	Durbin-Watson
1	.401[a]	.161	**.153**	.87731	2.024

a. Predictors: (Constant), Lifetime value (CECL), Air Quality (AAQ)
b. Dependent Variable: Recognition (CCR)

Table 3) ANOVA

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	32.687	2	16.344	21.235	.000[b]
	Residual	170.867	222	.770		
	Total	203.554	224			

a. Dependent Variable: Recognition (CCR)
b. Predictors: (Constant), Lifetime value (CECL), Air Quality (AAQ)

Table 4) Coefficients

Coefficients[a]

Model		Unstandardized Coefficients		**Standardized**		
		B	Std. Error	**Beta**	t	**Sig.**
1	(Constant)	1.017	.393		2.587	.010
	Air Quality (AAQ)	.180	.105	.111	1.706	.089
	Lifetime value (CECL)	0.378	0.070	**0.352**	5.435	**0.000**

a. Dependent Variable: Recognition (CCR)

Path 3) Air Quality (AAQ) –Influence value (CECL) - Recognition (CCR)

Table 1) Correlations

Correlations

		Air Quality (AAQ)	Recognition (CCR)	Influential value (CECI)
Air Quality (AAQ)	Pearson Correlation	1.000	.221**	.335**
	Sig. (2-tailed)		0.001	0.000
	N	225.000	225.000	225.000
Recognition (CCR)	Pearson Correlation	.221**	1.000	.418**
	Sig. (2-tailed)	0.001		0.000
	N	225.000	225.000	225.000
Influence value (CECI)	Pearson Correlation	.335**	.418**	1.000
	Sig. (2-tailed)	0.000	0.000	
	N	225.000	225.000	225.000

**. Correlation is significant at the 0.01 level (2-tailed).

Table 2) Model Summary

Model Summary[b]

Model	R	R Square	**Adjusted R Square**	Std. Error of the	Durbin-Watson
1	.427[a]	.182	**.175**	.86587	1.966

a. Predictors: (Constant), Influence value (CECI), Air Quality (AAQ)

b. Dependent Variable: Recognition (CCR)

Table 2) ANOVA

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	37.114	2	18.557	24.752	.000[b]
	Residual	166.440	222	.750		
	Total	203.554	224			

a. Dependent Variable: Recognition (CCR)

b. Predictors: (Constant), Influence value (CECI), Air Quality (AAQ)

Table 3) Coefficients

Coefficients[a]

Model		Unstandardized Coefficients		**Standardized**		
		B	Std. Error	**Beta**	t	**Sig.**
1	(Constant)	1.213	.377		3.220	.001
	Air Quality (AAQ)	.148	.105	.091	1.414	.159
	Influence value (CECI)	0.451	0.075	**0.388**	6.019	**0.000**

a. Dependent Variable: Recognition (CCR)

Path 4) Path 4) Air Temperature (AT) – Contribution (CCCon)

Table 1) Model Summary

Model Summary[b]

Model	R	R Square	**Adjusted R Square**	Std. Error of the	Durbin-Watson
1	.220[a]	.049	**.044**	.86080	2.101

a. Predictors: (Constant), Temperature (AT)

b. Dependent Variable: Contribution (CCCon)

Table 2) ANOVA

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	8.424	1	8.424	11.368	.001[b]
	Residual	165.238	223	.741		
	Total	173.661	224			

a. Dependent Variable: Contribution (CCCon)

b. Predictors: (Constant), Temperature (AT)

Table 3) Coefficients

Coefficients[a]

Model		Unstandardized Coefficients		**Standardized**	t	**Sig.**
		B	Std. Error	**Beta**		
1	(Constant)	2.091	.286		7.310	.000
	Temperature (AT)	.256	.076	.220	3.372	.001

a. Dependent Variable: Contribution (CCCon)

Path 5) Air Temperature (AT) –Influence value (CECI) - Contribution (CCCon)

Table 1) Correlations

Correlations

		Temperature (AT)	Contribution (CCCon)	Influence value (CECI)
Temperature (AT)	Pearson Correlation	1.000	.220**	.230**
	Sig. (2-tailed)		0.001	0.001
	N	225.000	225.000	225.000
Contribution (CCCon)	Pearson Correlation	.220**	1.000	.501**
	Sig. (2-tailed)	0.001		0.000
	N	225.000	225.000	225.000
Influence value (CECI)	Pearson Correlation	.230**	.501**	1.000
	Sig. (2-tailed)	0.001	0.000	
	N	225.000	225.000	225.000

**. Correlation is significant at the 0.01 level (2-tailed).

Table 2) Model Summary

Model Summary[b]

Model	R	R Square	**Adjusted R Square**	Std. Error of the Estimate	Durbin-Watson
1	.513[a]	.263	**.256**	.75933	2.039

a. Predictors: (Constant), Influence value (CECI), Temperature (AT)

b. Dependent Variable: Contribution (CCCon)

Table 3) ANOVA

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	45.660	2	22.830	39.595	.000[b]
	Residual	128.002	222	.577		
	Total	173.661	224			

a. Dependent Variable: Contribution (CCCon)

b. Predictors: (Constant), Influence value (CECI), Temperature (AT)

Table 4) Coefficients

Coefficients[a]

Model		Unstandardized Coefficients		**Standardized Coefficients**	t	**Sig.**
		B	Std. Error	**Beta**		
1	(Constant)	1.139	.279		4.085	.000
	Temperature (AT)	.129	.069	.111	1.871	.063
	Influence value (CECI)	0.511	0.064	**0.476**	8.036	**0.000**

a. Dependent Variable: Contribution (CCCon)

Path 6) Temperature (AT) – Recognition (CCR)

Table 1) Model Summary

Model Summary[b]

Model	R	R Square	**Adjusted R Square**	Std. Error of the Estimate	Durbin-Watson
1	.147[a]	.022	**.017**	.94504	2.046

a. Predictors: (Constant), Temperature (AT)
b. Dependent Variable: Recognition (CCR)

Table 2) ANOVA

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	4.395	1	4.395	4.921	.028[b]
	Residual	199.160	223	.893		
	Total	203.554	224			

a. Dependent Variable: Recognition (CCR)
b. Predictors: (Constant), Temperature (AT)

Table 3) Coefficients

Coefficients[a]

Model		Unstandardized Coefficients		**Standardized Coefficients**	t	**Sig.**
		B	Std. Error	**Beta**		
1	(Constant)	2.332	.314		7.423	.000
	Temperature (AT)	.185	.083	.147	2.218	.028

a. Dependent Variable: Recognition (CCR)

Path 7) Air Temperature (AT) –Lifetime value (CECL) - Recognition (CCR)

Table 1) Correlations

Correlations

		Temperature (AT)	Lifetime value	Recognition (CCR)
Temperature (AT)	Pearson Correlation	1.000	.217**	.147*
	Sig. (2-tailed)		0.001	0.028
	N	225.000	225.000	225.000
Lifetime value (CECL)	Pearson Correlation	.217**	1.000	.387**
	Sig. (2-tailed)	0.001		0.000
	N	225.000	225.000	225.000
Recognition (CCR)	Pearson Correlation	.147*	.387**	1.000
	Sig. (2-tailed)	0.028	0.000	
	N	225.000	225.000	225.000

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

Table 2) Model Summary

Model Summary[b]

Model	R	R Square	**Adjusted R Square**	Std. Error of the Estimate	Durbin-Watson
1	.392[a]	.154	**.146**	.88088	2.038

a. Predictors: (Constant), Lifetime value (CECL), Temperature (AT)

b. Dependent Variable: Recognition (CCR)

Table 3) ANOVA

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	31.293	2	15.646	20.164	.000[b]
	Residual	172.262	222	.776		
	Total	203.554	224			

a. Dependent Variable: Recognition (CCR)

b. Predictors: (Constant), Lifetime value (CECL), Temperature (AT)

Table 4) Coefficients

Coefficients[a]

Model		Unstandardized Coefficients		**Standardized Coefficients**	t	**Sig.**
		B	Std. Error	**Beta**		
1	(Constant)	1.296	.342		3.793	.000
	Temperature (AT)	.083	.079	.066	1.044	.298
	Lifetime value	.400	.068	0.372	5.888	.000

a. Dependent Variable: Recognition (CCR)

Path 8) Air Temperature (AT) –Referral Value (CECR) - Recognition (CCR)

Table 1) Correlations

Correlations

		Temperature (AT)	Recognition (CCR)	Referrals value (CECR)
Temperature (AT)	Pearson Correlation	1.000	.147*	.134*
	Sig. (2-tailed)		0.028	0.044
	N	225.000	225.000	225.000
Recognition (CCR)	Pearson Correlation	.147*	1.000	.312**
	Sig. (2-tailed)	0.028		0.000
	N	225.000	225.000	225.000
Referral value (CECR)	Pearson Correlation	.134*	.312**	1.000
	Sig. (2-tailed)	0.044	0.000	
	N	225.000	225.000	225.000

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).

Table 2) Model Summary

Model Summary[b]

Model	R	R Square	**Adjusted R Square**	Std. Error of the Estimate	Durbin-Watson
1	.329[a]	.108	**.100**	.90419	1.932

a. Predictors: (Constant), Referrals value (CECR), Temperature (AT)

b. Dependent Variable: Recognition (CCR)

Table 3) ANOVA

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	22.056	2	11.028	13.489	.000[b]
	Residual	181.498	222	.818		
	Total	203.554	224			

a. Dependent Variable: Recognition (CCR)

b. Predictors: (Constant), Referrals value (CECR), Temperature (AT)

Table 4) Coefficients

Coefficients[a]

Model		Unstandardized Coefficients		**Standardized Coefficients**	t	**Sig.**
		B	Std. Error	**Beta**		
1	(Constant)	1.689	0.331		5.107	0.000
	Temperature (AT)	0.134	0.080	0.107	1.674	0.096
	Referrals value (CECR)	0.282	0.061	0.297	4.648	0.000

a. Dependent Variable: Recognition (CCR)

Path 9) Temperature (AT) –Influence value (CECL) - Recognition (CCR)

Table 1) Correlations

Correlations

		Temperature (AT)	Recognition (CCR)	Influential value (CECI)
Temperature (AT)	Pearson Correlation	1.000	.147*	.230**
	Sig. (2-tailed)		0.028	0.001
	N	225.000	225.000	225.000
Recognition (CCR)	Pearson Correlation	.147*	1.000	.418**
	Sig. (2-tailed)	0.028		0.000
	N	225.000	225.000	225.000
Influential value (CECI)	Pearson Correlation	.230**	.418**	1.000
	Sig. (2-tailed)	0.001	0.000	
	N	225.000	225.000	225.000

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).

Table 2) Model Summary

Model Summary[b]

Model	R	R Square	**Adjusted R Square**	Std. Error of the Estimate	Durbin-Watson
1	.422[a]	.178	**.170**	.86833	1.978

a. Predictors: (Constant), Influence value (CECI), Temperature (AT)

b. Dependent Variable: Recognition (CCR)

Table 3) ANOVA

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	36.168	2	18.084	23.984	.000[b]
	Residual	167.386	222	.754		
	Total	203.554	224			

a. Dependent Variable: Recognition (CCR)

b. Predictors: (Constant), Influence value (CECI), Temperature (AT)

Table 4) Coefficients

Coefficients[a]

Model		Unstandardized Coefficients		**Standardized Coefficients**	t	**Sig.**
		B	Std. Error	**Beta**		
1	(Constant)	1.452	0.319		4.554	0.000
	Temperature (AT)	0.067	0.079	0.054	0.856	0.393
	Influence value (CECI)	0.472	0.073	0.406	6.492	0.000

a. Dependent Variable: Recognition (CCR)

Path 10) Temperature (AT) –Knowledge value (CECK) - Recognition (CCR)

Table 1) Correlations

Correlations

		Temperature (AT)	Recognition (CCR)	Knowledge value (CECK)
Temperature (AT)	Pearson Correlation	1.000	.147*	.215**
	Sig. (2-tailed)		0.028	0.001
	N	225.000	225.000	225.000
Recognition (CCR)	Pearson Correlation	.147*	1.000	.301**
	Sig. (2-tailed)	0.028		0.000
	N	225.000	225.000	225.000
Knowledge value (CECK)	Pearson Correlation	.215**	.301**	1.000
	Sig. (2-tailed)	0.001	0.000	
	N	225.000	225.000	225.000

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).

Table 2) Model Summary

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.312[a]	.098	.090	.90960	2.055

a. Predictors: (Constant), Knowledge value (CECK), Temperature (AT)

b. Dependent Variable: Recognition (CCR)

Table 3) ANOVA

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	19.876	2	9.938	12.011	.000[b]
	Residual	183.679	222	.827		
	Total	203.554	224			

a. Dependent Variable: Recognition (CCR)

b. Predictors: (Constant), Knowledge value (CECK), Temperature (AT)

Table 4) Coefficients

Coefficients[a]

Model		Unstandardized Coefficients		**Standardized Coefficients**	t	Sig.
		B	Std. Error	**Beta**		
1	(Constant)	1.925	.317		6.080	.000
	Temperature (AT)	.108	.082	.086	1.319	.188
	Knowledge value (CECK)	.243	.056	0.282	4.326	.000

a. Dependent Variable: Recognition (CCR)

Path 11) Temperature (AT) – Affective response (CCA)

Table 1) Model Summary

Model Summary[b]

Model	R	R Square	**Adjusted R Square**	Std. Error of the	Durbin-Watson
1	.195[a]	.038	**.034**	.96222	2.063

a. Predictors: (Constant), Temperature (AT)

b. Dependent Variable: Affective response (CCA)

Table 2) ANOVA

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	8.119	1	8.119	8.769	.003[b]
	Residual	206.470	223	.926		
	Total	214.589	224			

a. Dependent Variable: Affective response (CCA)

b. Predictors: (Constant), Temperature (AT)

Table 3) Coefficients

Coefficients[a]

Model		Unstandardized Coefficients		**Standardized**	t	Sig.
		B	Std. Error	**Beta**		
1	(Constant)	2.300	.320		7.191	.000
	Temperature (AT)	.251	.085	.195	2.961	.003

a. Dependent Variable: Affective response (CCA)

Path 12) Temperature (AT) – Lifetime value (CECL) – Affective response (CCA)

Table 1) Correlations

Correlations

		Temperature (AT)	Affective response	Lifetime value (CECL)
Temperature (AT)	Pearson Correlation	1.000	.195**	.217**
	Sig. (2-tailed)		0.003	0.001
	N	225.000	225.000	225.000
Affective response (CCA)	Pearson Correlation	.195**	1.000	.558**
	Sig. (2-tailed)	0.003		0.000
	N	225.000	225.000	225.000
Lifetime value (CECL)	Pearson Correlation	.217**	.558**	1.000
	Sig. (2-tailed)	0.001	0.000	
	N	225.000	225.000	225.000

**. Correlation is significant at the 0.01 level (2-tailed).

Table 2) Model Summary

Model Summary[b]

Model	R	R Square	**Adjusted R Square**	Std. Error of the	Durbin-Watson
1	.563[a]	.317	**.310**	.81278	1.952

a. Predictors: (Constant), Lifetime value (CECL), Temperature (AT)

b. Dependent Variable: Affective response (CCA)

Table 3) ANOVA

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	67.934	2	33.967	51.417	**.000**[b]
	Residual	146.655	222	.661		
	Total	214.589	224			

a. Dependent Variable: Affective response (CCA)

b. Predictors: (Constant), Lifetime value (CECL), Temperature (AT)

Table 4) Coefficients

Coefficients[a]

Model		Unstandardized Coefficients		**Standardized**	t	**Sig.**
		B	Std. Error	**Beta**		
1	(Constant)	0.755	0.315		2.395	0.017
	Temperature (AT)	0.099	0.073	0.077	1.355	0.177
	Lifetime value (CECL)	0.596	0.063	0.541	9.516	0.000

a. Dependent Variable: Affective response (CCA)

Path 13) Air Temperature (AT) – Influence value (CECI) – Affective response (CCA)

Table 1) Correlations

Correlations

		Temperature (AT)	Affective response	Influence value (CECI)
Temperature (AT)	Pearson Correlation	1.000	.195**	.230**
	Sig. (2-tailed)		0.003	0.001
	N	225.000	225.000	225.000
Affective response (CCA)	Pearson Correlation	.195**	1.000	.427**
	Sig. (2-tailed)	0.003		0.000
	N	225.000	225.000	225.000
Influence value (CECI)	Pearson Correlation	.230**	.427**	1.000
	Sig. (2-tailed)	0.001	0.000	
	N	225.000	225.000	225.000

**. Correlation is significant at the 0.01 level (2-tailed).

Table 2) Model Summary

Model Summary[b]

Model	R	R Square	**Adjusted R Square**	Std. Error of the	Durbin-Watson
1	.438[a]	.192	**.185**	.88375	2.040

a. Predictors: (Constant), Influence value (CECI), Temperature (AT)

b. Dependent Variable: Affective response (CCA)

Table 3) Coefficients

Coefficients[a]

Model		Unstandardized Coefficients		**Standardized**	t	Sig.
		B	Std. Error	**Beta**		
1	(Constant)	1.402	.325		4.321	.000
	Temperature (AT)	.131	.080	.102	1.640	.102
	Influence value (CECI)	.482	.074	0.40346882	6.508	.000

a. Dependent Variable: Affective response (CCA)

Path 14) Air Temperature (AT) – Knowledge value (CECK) – Affective response (CCA)

Table 1) Correlations

Correlations

		Temperature (AT)	Affective response	Knowledge value
Temperature (AT)	Pearson Correlation	1.000	.195**	.215**
	Sig. (2-tailed)		0.003	0.001
	N	225.000	225.000	225.000
Affective response (CCA)	Pearson Correlation	.195**	1.000	.363**
	Sig. (2-tailed)	0.003		0.000
	N	225.000	225.000	225.000
Knowledge value (CECK)	Pearson Correlation	.215**	.363**	1.000
	Sig. (2-tailed)	0.001	0.000	
	N	225.000	225.000	225.000

**. Correlation is significant at the 0.01 level (2-tailed).

Table 2) Model Summary

Model Summary[b]

Model	R	R Square	**Adjusted R Square**	Std. Error of the	Durbin-Watson
1	.382[a]	.146	**.138**	.90848	2.068

a. Predictors: (Constant), Knowledge value (CECK), Temperature (AT)

b. Dependent Variable: Affective response (CCA)

Table 3) ANOVA

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	31.365	2	15.682	19.001	**.000[b]**
	Residual	183.224	222	.825		
	Total	214.589	224			

a. Dependent Variable: Affective response (CCA)

b. Predictors: (Constant), Knowledge value (CECK), Temperature (AT)

Table 4) Coefficients

Coefficients[a]

Model		Unstandardized Coefficients		**Standardized**	t	Sig.
		B	Std. Error	**Beta**		
1	(Constant)	1.801	0.316		5.697	0.000
	Temperature (AT)	0.157	0.082	0.122	1.920	0.056
	Knowledge value (CECK)	0.298	0.056	0.337	5.307	0.000

a. Dependent Variable: Affective response (CCA)

Path 15) Odour (AO) – Contribution (CCCon)

Table 1) Model Summary

Model Summary[b]

Model	R	R Square	**Adjusted R Square**	Std. Error of the Estimate	Durbin-Watson
1	.135[a]	.018	**.014**	.87559	2.160

a. Predictors: (Constant), Odour (AO)
b. Dependent Variable: Contribution (CCCon)

Table 2) ANOVA

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	3.143	1	3.143	4.099	.044[b]
	Residual	170.199	222	.767		
	Total	173.342	223			

a. Dependent Variable: Contribution (CCCon)
b. Predictors: (Constant), Odour (AO)

Table 3) Coefficients

Coefficients[a]

Model		Unstandardized Coefficients		**Standardized Coefficients**	t	**Sig.**
		B	Std. Error	**Beta**		
1	(Constant)	2.307	.364		6.343	.000
	Odour (AO)	.188	.093	.135	2.025	.044

a. Dependent Variable: Contribution (CCCon)

Path 16) Odour (AO) – Lifetime value (CECL) – Contribution (CCCon)

Table 1) Correlations

Correlations

		Odour (AO)	Contribution (CCCon)	Lifetime value (CECL)
Odour (AO)	Pearson Correlation	1.000	.135*	.173**
	Sig. (2-tailed)		0.044	0.009
	N	224.000	224.000	224.000
Contribution (CCCon)	Pearson Correlation	.135*	1.000	.425**
	Sig. (2-tailed)	0.044		0.000
	N	224.000	225.000	225.000
Lifetime value (CECL)	Pearson Correlation	.173**	.425**	1.000
	Sig. (2-tailed)	0.009	0.000	
	N	224.000	225.000	225.000

*. Correlation is significant at the 0.05 level (2-tailed).
**. Correlation is significant at the 0.01 level (2-tailed).

Table 2) Model Summary

Model Summary[b]

Model	R	R Square	**Adjusted R Square**	Std. Error of the Estimate	Durbin-Watson
1	.441[a]	.194	**.187**	.79491	2.124

a. Predictors: (Constant), Lifetime value (CECL), Odour (AO)
b. Dependent Variable: Contribution (CCCon)

Table 3) ANOVA

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	33.697	2	16.849	26.665	.000[b]
	Residual	139.645	221	.632		
	Total	173.342	223			

a. Dependent Variable: Contribution (CCCon)
b. Predictors: (Constant), Lifetime value (CECL), Odour (AO)

Table 4) Coefficients

Coefficients[a]

Model		Unstandardized Coefficients		**Standardized Coefficients**	t	**Sig.**
		B	Std. Error	**Beta**		
1	(Constant)	1.193	0.367		3.250	0.001
	Odour (AO)	0.085	0.086	0.061	0.991	0.323
	Lifetime value (CECL)	0.428	0.061	0.426	6.954	0.000

a. Dependent Variable: Contribution (CCCon)

Path 17) Odour (AO) – Referral value (CECR) – Contribution (CCCon)

Table 1) Correlations

Correlations

		Odour (AO)	Contribution (CCCon)	Referral value (CECR)
Odour (AO)	Pearson Correlation	1.000	.135*	.136*
	Sig. (2-tailed)		0.044	0.042
	N	224.000	224.000	224.000
Contribution (CCCon)	Pearson Correlation	.135*	1.000	.331**
	Sig. (2-tailed)	0.044		0.000
	N	224.000	225.000	225.000
Referral value (CECR)	Pearson Correlation	.136*	.331**	1.000
	Sig. (2-tailed)	0.042	0.000	
	N	224.000	225.000	225.000

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).

Table 2) Model Summary

Model Summary[b]

Model	R	R Square	**Adjusted R Square**	Std. Error of the Estimate	Durbin-Watson
1	.350[a]	.123	**.115**	.82956	2.012

a. Predictors: (Constant), Referral value (CECR), Odour (AO)

b. Dependent Variable: Contribution (CCCon)

Table 3) ANOVA

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	21.255	2	10.627	15.443	.000[b]
	Residual	152.087	221	.688		
	Total	173.342	223			

a. Dependent Variable: Contribution (CCCon)

b. Predictors: (Constant), Referral value (CECR), Odour (AO)

Table 4) Coefficients

Coefficients[a]

(CECR)

Model		Unstandardized Coefficients		**Standardized Coefficients**	t	**Sig.**
		B	Std. Error	**Beta**		
1	(Constant)	1.700	0.364		4.667	0.000
	Odour (AO)	0.126	0.089	0.090	1.421	0.157
	Referral value (CECR)	0.288	0.056	0.326	5.130	0.000

a. Dependent Variable: Contribution (CCCon)

Path 18) Odour (AO) – Influence value (CECI) – Contribution (CCCon)

Table 1) Correlations

Correlations

		Odour (AO)	Contribution (CCCon)	Influence value (CECI)
Odour (AO)	Pearson Correlation	1.000	.135*	.173**
	Sig. (2-tailed)		0.044	0.010
	N	224.000	224.000	224.000
Contribution (CCCon)	Pearson Correlation	.135*	1.000	.501**
	Sig. (2-tailed)	0.044		0.000
	N	224.000	225.000	225.000
Influence value (CECI)	Pearson Correlation	.173**	.501**	1.000
	Sig. (2-tailed)	0.010	0.000	
	N	224.000	225.000	225.000

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).

Table 2) Model Summary

Model Summary[b]

Model	R	R Square	**Adjusted R Square**	Std. Error of the Estimate	Durbin-Watson
1	.511[a]	.261	**.255**	.76114	2.083

a. Predictors: (Constant), Influence value (CECI), Odour (AO)

b. Dependent Variable: Contribution (CCCon)

Table 3) ANOVA

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	45.310	2	22.655	39.105	.000[b]
	Residual	128.032	221	.579		
	Total	173.342	223			

a. Dependent Variable: Contribution (CCCon)

b. Predictors: (Constant), Influence value (CECI), Odour (AO)

Table 4) Coefficients

Coefficients[a]

Model		Unstandardized Coefficients		**Standardized Coefficients**	t	**Sig.**
		B	Std. Error	**Beta**		
1	(Constant)	1.268	0.339		3.741	0.000
	Odour (AO)	0.067	0.082	0.048	0.820	0.413
	Influence value (CECI)	0.540	0.063	0.501	8.531	0.000

a. Dependent Variable: Contribution (CCCon)

Path 19) Odour (AO) – Knowledge value (CECI) – Contribution (CCCon)

Table 1) Correlations

Correlations

		Odour (AO)	Contribution (CCCon)	Knowledge value (CECK)
Odour (AO)	Pearson Correlation	1.000	.135*	.173**
	Sig. (2-tailed)		0.044	0.010
	N	224.000	224.000	224.000
Contribution (CCCon)	Pearson Correlation	.135*	1.000	.434**
	Sig. (2-tailed)	0.044		0.000
	N	224.000	225.000	225.000
Knowledge value (CECK)	Pearson Correlation	.173**	.434**	1.000
	Sig. (2-tailed)	0.010	0.000	
	N	224.000	225.000	225.000

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).

Table 2) Model Summary

Model Summary[b]

Model	R	R Square	**Adjusted R Square**	Std. Error of the Estimate	Durbin-Watson
1	.437[a]	.191	**.183**	.79670	2.129

a. Predictors: (Constant), Knowledge value (CECK), Odour (AO)

b. Dependent Variable: Contribution (CCCon)

Table 3) ANOVA

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	33.068	2	16.534	26.049	.000[b]
	Residual	140.274	221	.635		
	Total	173.342	223			

a. Dependent Variable: Contribution (CCCon)

b. Predictors: (Constant), Knowledge value (CECK), Odour (AO)

Table 4) Coefficients

Coefficients[a]

Model		Unstandardized Coefficients		**Standardized Coefficients**	t	**Sig.**
		B	Std. Error	**Beta**		
1	(Constant)	1.749	0.341		5.132	0.000
	Odour (AO)	0.086	0.086	0.062	1.006	0.315
	Knowledge value (CECK)	0.336	0.049	0.422	6.866	0.000

a. Dependent Variable: Contribution (CCCon)

Path 20) Odour (AO) – Affective response (CCA)

Table 1) Model Summary

Model Summary[b]

Model	R	R Square	**Adjusted R Square**	Std. Error of the	Durbin-Watson
1	.137[a]	.019	**.014**	.97374	2.108

a. Predictors: (Constant), Odour (AO)

b. Dependent Variable: Affective response (CCA)

Table 2) ANOVA

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	4.042	1	4.042	4.263	.040[b]
	Residual	210.495	222	.948		
	Total	214.537	223			

a. Dependent Variable: Affective response (CCA)

b. Predictors: (Constant), Odour (AO)

Table 3) Coefficients

Coefficients[a]

Model		Unstandardized Coefficients		**Standardized**		
		B	Std. Error	**Beta**	t	**Sig.**
1	(Constant)	2.404	.405		5.944	.000
	Odour (AO)	.213	.103	.137	2.065	.040

a. Dependent Variable: Affective response (CCA)

Path 21) Odour (AO) – Lifetime value (CECL) – Affective Response (CCA)

Table 1) Correlations

Correlations

		Odour (AO)	Lifetime value	Affective response
Odour (AO)	Pearson Correlation	1.000	.173**	.137*
	Sig. (2-tailed)		0.009	0.040
	N	224.000	224.000	224.000
Lifetime value (CECL)	Pearson Correlation	.173**	1.000	.558**
	Sig. (2-tailed)	0.009		0.000
	N	224.000	225.000	225.000
Affective response (CCA)	Pearson Correlation	.137*	.558**	1.000
	Sig. (2-tailed)	0.040	0.000	
	N	224.000	225.000	225.000

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

Table 2) Model Summary

Model Summary[b]

Model	R	R Square	**Adjusted R Square**	Std. Error of the Estimate	Durbin-Watson
1	.563[a]	.317	**.311**	.81403	1.966

a. Predictors: (Constant), Lifetime value (CECL), Odour (AO)

b. Dependent Variable: Affective response (CCA)

Table 3) ANOVA

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	68.092	2	34.046	51.378	.000[b]
	Residual	146.446	221	.663		
	Total	214.537	223			

a. Dependent Variable: Affective response (CCA)

b. Predictors: (Constant), Lifetime value (CECL), Odour (AO)

Table 4) Coefficients

Coefficients[a]

Model		Unstandardized Coefficients		**Standardized**	t	**Sig.**
		B	Std. Error	**Beta**		
1	(Constant)	0.791	0.376		2.105	0.036
	Odour (AO)	0.064	0.088	0.041	0.728	0.468
	Lifetime value (CECL)	0.619	0.063	0.555	9.831	0.000

a. Dependent Variable: Affective response (CCA)

Path 22) Odour (AO) – Referral value (CECR) – Affective Response (CCA)

Table 1) Correlations

Correlations

		Odour (AO)	Affective response	Referral Value (CECR)
Odour (AO)	Pearson Correlation	1.000	.137*	.136*
	Sig. (2-tailed)		0.040	0.042
	N	224.000	224.000	224.000
Affective response (CCA)	Pearson Correlation	.137*	1.000	.320**
	Sig. (2-tailed)	0.040		0.000
	N	224.000	225.000	225.000
Referral Value (CECR)	Pearson Correlation	.136*	.320**	1.000
	Sig. (2-tailed)	0.042	0.000	
	N	224.000	225.000	225.000

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).

Table 2) Model Summary

Model Summary[b]

Model	R	R Square	**Adjusted R Square**	Std. Error of the Estimate	Durbin-Watson
1	.334[a]	.112	**.104**	.92865	1.985

a. Predictors: (Constant), Referral Value (CECR), Odour (AO)

b. Dependent Variable: Affective response (CCA)

Table 3) ANOVA

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	23.949	2	11.975	13.885	.000[b]
	Residual	190.588	221	.862		
	Total	214.537	223			

a. Dependent Variable: Affective response (CCA)

b. Predictors: (Constant), Referral Value (CECR), Odour (AO)

Table 4) Coefficients

Coefficients[a]

Model		Unstandardized Coefficients		**Standardized**	t	**Sig.**
		B	Std. Error	**Beta**		
1	(Constant)	1.768	0.408		4.335	0.000
	Odour (AO)	0.148	0.099	0.096	1.493	0.137
	Referral Value (CECR)	0.302	0.063	0.307	4.805	0.000

a. Dependent Variable: Affective response (CCA)

Path 23) Odour (AO) – Influence value (CECI) – Affective Response (CCR)

Table 1) Correlations

Correlations

		Odour (AO)	Affective response	Influence value (CECI)
Odour (AO)	Pearson Correlation	1.000	.137*	.173**
	Sig. (2-tailed)		0.040	0.010
	N	224.000	224.000	224.000
Affective response (CCA)	Pearson Correlation	.137*	1.000	.427**
	Sig. (2-tailed)	0.040		0.000
	N	224.000	225.000	225.000
Influence value (CECI)	Pearson Correlation	.173**	.427**	1.000
	Sig. (2-tailed)	0.010	0.000	
	N	224.000	225.000	225.000

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).

Table 2) Model Summary

Model Summary[b]

Model	R	R Square	**Adjusted R Square**	Std. Error of the Estimate	Durbin-Watson
1	.432[a]	.187	**.180**	.88837	2.066

a. Predictors: (Constant), Influence value (CECI), Odour (AO)

b. Dependent Variable: Affective response (CCA)

Table 3) ANOVA

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	40.122	2	20.061	25.419	.000[b]
	Residual	174.415	221	.789		
	Total	214.537	223			

a. Dependent Variable: Affective response (CCA)

b. Predictors: (Constant), Influence value (CECI), Odour (AO)

Table 4) Coefficients

Coefficients[a]

Model		Unstandardized Coefficients		**Standardized**	t	**Sig.**
		B	Std. Error	**Beta**		
1	(Constant)	1.443	0.396		3.648	0.000
	Odour (AO)	0.101	0.096	0.065	1.061	0.290
	Influence value (CECI)	0.500	0.074	0.416	6.761	0.000

a. Dependent Variable: Affective response (CCA)

Path 24) Odour (AO) – Knowledge value (CECK) – Affective Response (CCA)

Table 1) Correlations

Correlations

		Odour (AO)	Affective response	Knowledge value (CECK)
Odour (AO)	Pearson Correlation	1.000	.137*	.173**
	Sig. (2-tailed)		0.040	0.010
	N	224.000	224.000	224.000
Affective response (CCA)	Pearson Correlation	.137*	1.000	.363**
	Sig. (2-tailed)	0.040		0.000
	N	224.000	225.000	225.000
Knowledge value (CECK)	Pearson Correlation	.173**	.363**	1.000
	Sig. (2-tailed)	0.010	0.000	
	N	224.000	225.000	225.000

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).

Table 2) Model Summary

Model Summary[b]

Model	R	R Square	**Adjusted R Square**	Std. Error of the Estimate	Durbin-Watson
1	.374[a]	.140	**.132**	.91390	2.092

a. Predictors: (Constant), Knowledge value (CECK), Odour (AO)

b. Dependent Variable: Affective response (CCA)

Table 3) ANOVA

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	29.954	2	14.977	17.932	.000[b]
	Residual	184.584	221	.835		
	Total	214.537	223			

a. Dependent Variable: Affective response (CCA)

b. Predictors: (Constant), Knowledge value (CECK), Odour (AO)

Table 4) Coefficients

Coefficients[a]

Model		Unstandardized Coefficients		**Standardized**	t	**Sig.**
		B	Std. Error	**Beta**		
1	(Constant)	1.885	0.391		4.821	0.000
	Odour (AO)	0.118	0.098	0.076	1.205	0.229
	Knowledge value (CECK)	0.313	0.056	0.353	5.570	0.000

a. Dependent Variable: Affective response (CCA)

Path 25) Crew (AC) – Contribution (CCCon)

Table 1) Model Summary

Model Summary[b]

Model	R	R Square	**Adjusted R Square**	Std. Error of the Estimate	Durbin-Watson
1	.323[a]	.105	**.101**	.83503	2.180

a. Predictors: (Constant), Crew (AC)
b. Dependent Variable: Contribution (CCCon)

Table 2) ANOVA

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	18.168	1	18.168	26.056	.000[b]
	Residual	155.493	223	.697		
	Total	173.661	224			

a. Dependent Variable: Contribution (CCCon)
b. Predictors: (Constant), Crew (AC)

Table 3) Coefficients

Coefficients[a]

Model		Unstandardized Coefficients		**Standardized Coefficients**	t	**Sig.**
		B	Std. Error	**Beta**		
1	(Constant)	1.697	.268		6.326	.000
	Crew (AC)	.335	.066	.323	5.104	.000

a. Dependent Variable: Contribution (CCCon)

Path 26) Crew (AC) – Lifetime value (CECL) – Contribution (CCCon)

Table 1) Correlations

Correlations

		Crew (AC)	Contribution (CCCon)	Lifetime value (CECL)
Crew (AC)	Pearson Correlation	1.000	.323**	.536**
	Sig. (2-tailed)		0.000	0.000
	N	225.000	225.000	225.000
Contribution (CCCon)	Pearson Correlation	.323**	1.000	.425**
	Sig. (2-tailed)	0.000		0.000
	N	225.000	225.000	225.000
Lifetime value (CECL)	Pearson Correlation	.536**	.425**	1.000
	Sig. (2-tailed)	0.000	0.000	
	N	225.000	225.000	225.000

**. Correlation is significant at the 0.01 level (2-tailed).

Table 2) Model Summary

Model Summary[b]

Model	R	R Square	**Adjusted R Square**	Std. Error of the Estimate	Durbin-Watson
1	.440[a]	.193	**.186**	.79440	2.137

a. Predictors: (Constant), Lifetime value (CECL), Crew (AC)
b. Dependent Variable: Contribution (CCCon)

Table 3) ANOVA

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	33.563	2	16.782	26.592	.000[b]
	Residual	140.098	222	.631		
	Total	173.661	224			

a. Dependent Variable: Contribution (CCCon)
b. Predictors: (Constant), Lifetime value (CECL), Crew (AC)

Table 4) Coefficients

Coefficients[a]

Model		Unstandardized Coefficients		**Standardized Coefficients**	t	**Sig.**
		B	Std. Error	**Beta**		
1	(Constant)	1.245	0.271		4.591	0.000
	Crew (AC)	0.139	0.074	0.134	1.883	0.061
	Lifetime value (CECL)	0.350	0.071	0.353	4.939	0.000

a. Dependent Variable: Contribution (CCCon)

Path 27) Customer-to-customer interaction (C2C)– Contribution (CCCon)

Table 1) Model Summary

Model Summary[b]

Model	R	R Square	**Adjusted R Square**	Std. Error of the Estimate	Durbin-Watson
1	.165[a]	.027	**.023**	.87037	2.141

a. Predictors: (Constant), Customer-to-customer interaction (C2C)
b. Dependent Variable: Contribution (CCCon)

Table 2) ANOVA

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	4.727	1	4.727	6.240	.013[b]
	Residual	168.934	223	.758		
	Total	173.661	224			

a. Dependent Variable: Contribution (CCCon)
b. Predictors: (Constant), Customer-to-customer interaction (C2C)

Table 3) Coefficients

Coefficients[a]

Model		Unstandardized Coefficients		**Standardized**	t	**Sig.**
		B	Std. Error	**Beta**		
1	(Constant)	2.598	.185		14.052	.000
	Customer-to-customer interaction (C2C)	.191	.077	.165	2.498	.013

a. Dependent Variable: Contribution (CCCon)

Path 28) Customer-to-customer interaction (C2C) –Referral Value (CECR) – Contribution (CCCon)

Table 1) Correlations

Correlations

		Referral value (CECR)	Customer-to-customer interaction (C2C)	Contribution (CCCon)
Referral value (CECR)	Pearson Correlation	1.000	.249**	.331**
	Sig. (2-tailed)		0.000	0.000
	N	225.000	225.000	225.000
Customer-to-customer interaction (C2C)	Pearson Correlation	.249**	1.000	.165*
	Sig. (2-tailed)	0.000		0.013
	N	225.000	225.000	225.000
Contribution (CCCon)	Pearson Correlation	.331**	.165*	1.000
	Sig. (2-tailed)	0.000	0.013	
	N	225.000	225.000	225.000

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

Table 2) Model Summary

Model Summary[b]

Model	R	R Square	**Adjusted R Square**	Std. Error of the Estimate	Durbin-Watson
1	.342[a]	.117	**.109**	.83110	2.006

a. Predictors: (Constant), Referral value (CECR), Customer-to-customer interaction (C2C)

b. Dependent Variable: Contribution (CCCon)

Table 3) ANOVA

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	20.321	2	10.160	14.710	.000[b]
	Residual	153.340	222	.691		
	Total	173.661	224			

a. Dependent Variable: Contribution (CCCon)

b. Predictors: (Constant), Referral value (CECR), Customer-to-customer interaction (C2C)

Table 4) Coefficients

Coefficients[a]

Model		Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	**Standardized Beta**	t	**Sig.**
1	(Constant)	2.007	0.216		9.292	0.000
	Customer-to-customer interaction (C2C)	0.102	0.075	0.088	1.352	0.178
	Referral value (CECR)	0.271	0.057	0.309	4.751	0.000

a. Dependent Variable: Contribution (CCCon)

Path 29) Customer-to-customer interaction (C2C) –Influence Value (CECI) – Contribution (CCCon)

Table 1) Correlations

Correlations

		Influence value (CECI)	Customer-to-customer interaction (C2C)	Contribution (CCCon)
Influence value (CECI)	Pearson Correlation	1.000	.225**	.501**
	Sig. (2-tailed)		0.001	0.000
	N	225.000	225.000	225.000
Customer-to-customer interaction (C2C)	Pearson Correlation	.225**	1.000	.165*
	Sig. (2-tailed)	0.001		0.013
	N	225.000	225.000	225.000
Contribution (CCCon)	Pearson Correlation	.501**	.165*	1.000
	Sig. (2-tailed)	0.000	0.013	
	N	225.000	225.000	225.000

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

Table 2) Model Summary

Model Summary[b]

Model	R	R Square	**Adjusted R Square**	Std. Error of the Estimate	Durbin-Watson
1	.504[a]	.254	**.247**	.76381	2.075

a. Predictors: (Constant), Influence value (CECI), Customer-to-customer interaction (C2C)

b. Dependent Variable: Contribution (CCCon)

Table 3) ANOVA

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	44.143	2	22.072	37.832	.000[b]
	Residual	129.518	222	.583		
	Total	173.661	224			

a. Dependent Variable: Contribution (CCCon)

b. Predictors: (Constant), Influence value (CECI), Customer-to-customer interaction (C2C)

Table 4) Coefficients

Coefficients[a]

Model		Unstandardized Coefficients		**Standardized**	t	**Sig.**
		B	Std. Error	**Beta**		
1	(Constant)	1.429	0.216		6.621	0.000
	Customer-to-customer interaction (C2C)	0.064	0.069	0.055	0.928	0.354
	Influence value (CECI)	0.525	0.064	0.489	8.220	0.000

a. Dependent Variable: Contribution (CCCon)

Path 30) Customer-to-customer interaction (C2C) –Knowedge Value (CECK) – Contribution (CCCon)

Table 1) Correlations

Correlations

		Knowledge Value (CECK)	Customer-to-customer interaction (C2C)	Contribution (CCCon)
Knowledge Value (CECK)	Pearson Correlation	1.000	.254**	.434**
	Sig. (2-tailed)		0.000	0.000
	N	225.000	225.000	225.000
Customer-to-customer interaction (C2C)	Pearson Correlation	.254**	1.000	.165*
	Sig. (2-tailed)	0.000		0.013
	N	225.000	225.000	225.000
Contribution (CCCon)	Pearson Correlation	.434**	.165*	1.000
	Sig. (2-tailed)	0.000	0.013	
	N	225.000	225.000	225.000

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

Table 2) Model Summary

Model Summary[b]

Model	R	R Square	**Adjusted R Square**	Std. Error of the Estimate	Durbin-Watson
1	,438[a]	.192	**.184**	.79516	2.118

a. Predictors: (Constant), Knowledge value (CECK), Customer-to-customer interaction (C2C)
b. Dependent Variable: Contribution (CCCon)

Table 3) ANOVA

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	33.294	2	16.647	26.329	,000[b]
	Residual	140.367	222	.632		
	Total	173.661	224			

a. Dependent Variable: Contribution (CCCon)
b. Predictors: (Constant), Knowledge value (CECK), Customer-to-customer interaction (C2C)

Table 4) Coefficients

Coefficients[a]

Model		Unstandardized Coefficients		**Standardized Coefficients**	t	**Sig.**
		B	Std. Error	**Beta**		
1	(Constant)	1.936	0.196		9.900	0.000
	Customer-to-customer interaction (C2C)	0.068	0.072	0.058	0.938	0.349
	Knowledge value (CECK)	0.333	0.050	0.419	6.722	0.000

a. Dependent Variable: Contribution (CCCon)

Path 31) Customer-to-customer interaction (C2C) – Recognition (CCR)

Table 1) Model Summary

Model Summary[b]

Model	R	R Square	**Adjusted R Square**	Std. Error of the Estimate	Durbin-Watson
1	.185[a]	.034	**.030**	.93899	1.995

a. Predictors: (Constant), Customer-to-customer interaction (C2C)
b. Dependent Variable: Recognition (CCR)

Table 2) ANOVA

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	6.934	1	6.934	7.864	.005[b]
	Residual	196.621	223	.882		
	Total	203.554	224			

a. Dependent Variable: Recognition (CCR)
b. Predictors: (Constant), Customer-to-customer interaction (C2C)

Table 3) Coefficients

Coefficients[a]

Model		Unstandardized Coefficients		**Standardized**	t	**Sig.**
		B	Std. Error	**Beta**		
1	(Constant)	2.483	.199		12.450	.000
	Customer-to-customer	.231	.083	.185	2.804	.005

a. Dependent Variable: Recognition (CCR)

Path 32) Customer-to-customer interaction (C2C) –Referral Value (CECR) – Recognition (CCR)

Table 1) Correlations

Correlations

		Referral value (CECR)	Customer-to-customer interaction (C2C)	Recognition (CCR)
Referral value (CECR)	Pearson Correlation	1.000	.249**	.312**
	Sig. (2-tailed)		0.000	0.000
	N	225.000	225.000	225.000
Customer-to-customer interaction (C2C)	Pearson Correlation	.249**	1.000	.185**
	Sig. (2-tailed)	0.000		0.005
	N	225.000	225.000	225.000
Recognition (CCR)	Pearson Correlation	.312**	.185**	1.000
	Sig. (2-tailed)	0.000	0.005	
	N	225.000	225.000	225.000

**. Correlation is significant at the 0.01 level (2-tailed).

Table 2) Model Summary

Model Summary[b]

Model	R	R Square	**Adjusted R Square**	Std. Error of the Estimate	Durbin-Watson
1	.331[a]	.109	**.101**	.90370	1.895

a. Predictors: (Constant), Referral value (CECR), Customer-to-customer interaction (C2C)
b. Dependent Variable: Recognition (CCR)

Table 3) ANOVA

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	22.252	2	11.126	13.624	.000[b]
	Residual	181.302	222	.817		
	Total	203.554	224			

a. Dependent Variable: Recognition (CCR)
b. Predictors: (Constant), Referral value (CECR), Customer-to-customer interaction (C2C)

Table 4) Coefficients

Coefficients[a]

Model		Unstandardized Coefficients		**Standardized**		
		B	Std. Error	**Beta**	t	**Sig.**
1	(Constant)	1.897	0.235		8.079	0.000
	Customer-to-customer interaction (C2C)	0.143	0.082	0.114	1.745	0.082
	Referral value (CECR)	0.269	0.062	0.283	4.331	0.000

a. Dependent Variable: Recognition (CCR)

Path 33) Customer-to-customer interaction (C2C) – Influence value (CECI) – Recognition (CCR)

Table 1) Correlations

Correlations

		Influence value (CECI)	Customer-to-customer interaction (C2C)	Recognition (CCR)
Influence value (CECI)	Pearson Correlation	1.000	.225**	.418**
	Sig. (2-tailed)		0.001	0.000
	N	225.000	225.000	225.000
Customer-to-customer interaction (C2C)	Pearson Correlation	.225**	1.000	.185**
	Sig. (2-tailed)	0.001		0.005
	N	225.000	225.000	225.000
Recognition (CCR)	Pearson Correlation	.418**	.185**	1.000
	Sig. (2-tailed)	0.000	0.005	
	N	225.000	225.000	225.000

**. Correlation is significant at the 0.01 level (2-tailed).

Table 2) Model Summary

Model Summary[b]

Model	R	R Square	**Adjusted R Square**	Std. Error of the Estimate	Durbin-Watson
1	.429[a]	.184	**.176**	.86519	1.956

a. Predictors: (Constant), Influence value (CECI), Customer-to-customer interaction (C2C)
b. Dependent Variable: Recognition (CCR)

Table 3) ANOVA

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	37.376	2	18.688	24.966	.000[b]
	Residual	166.178	222	.749		
	Total	203.554	224			

a. Dependent Variable: Recognition (CCR)
b. Predictors: (Constant), Influence value (CECI), Customer-to-customer interaction (C2C)

Table 4) Coefficients

Coefficients[a]

Model		Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	**Standardized Beta**	t	**Sig.**
1	(Constant)	1.456	0.244		5.955	0.000
	Customer-to-customer interaction (C2C)	0.120	0.078	0.095	1.534	0.127
	Influence value (CECI)	0.461	0.072	0.397	6.377	0.000

a. Dependent Variable: Recognition (CCR)

Path 34) Customer-to-customer interaction (C2C) – Knowledge value (CECK) – Recognition (CCR)

Table 1) Correlations

Correlations

		Knowledge value (CECK)	Customer-to-customer interaction (C2C)	Recognition (CCR)
Knowledge value (CECK)	Pearson Correlation	1.000	.254**	.301**
	Sig. (2-tailed)		0.000	0.000
	N	225.000	225.000	225.000
Customer-to-customer interaction (C2C)	Pearson Correlation	.254**	1.000	.185**
	Sig. (2-tailed)	0.000		0.005
	N	225.000	225.000	225.000
Recognition (CCR)	Pearson Correlation	.301**	.185**	1.000
	Sig. (2-tailed)	0.000	0.005	
	N	225.000	225.000	225.000

**. Correlation is significant at the 0.01 level (2-tailed).

Table 2) Model Summary

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	20.980	2	10.490	12.756	.000[b]
	Residual	182.574	222	.822		
	Total	203.554	224			

a. Dependent Variable: Recognition (CCR)

b. Predictors: (Constant), Knowledge value (CECK), Customer-to-customer interaction (C2C)

Table 3) ANOVA

Model Summary[b]

Model	R	R Square	**Adjusted R Square**	Std. Error of the Estimate	Durbin-Watson
1	.321[a]	.103	**.095**	.90687	2.020

a. Predictors: (Constant), Knowledge value (CECK), Customer-to-customer interaction (C2C)

b. Dependent Variable: Recognition (CCR)

Table 4) Coefficients

Coefficients[a]

Model		Unstandardized Coefficients		**Standardized Coefficients**	t	**Sig.**
		B	Std. Error	**Beta**		
1	(Constant)	2.019	0.223		9.053	0.000
	Customer-to-customer interaction (C2C)	0.145	0.082	0.116	1.759	0.080
	Knowledge value (CECK)	0.234	0.057	0.272	4.133	0.000

a. Dependent Variable: Recognition (CCR)

Path 35) Customer-to-customer interaction (C2C) – Affective Response (CCA)

Table 1) Model Summary

Model Summary[b]

Model	R	R Square	**Adjusted R Square**	Std. Error of the	Durbin-Watson
1	.189[a]	.036	**.032**	.96319	2.059

a. Predictors: (Constant), Customer-to-customer interaction (C2C)

b. Dependent Variable: Affective Response (CCA)

Table 2) ANOVA

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	7.703	1	7.703	8.302	**.004**[b]
	Residual	206.887	223	.928		
	Total	214.589	224			

a. Dependent Variable: Affective Response (CCA)

b. Predictors: (Constant), Customer-to-customer interaction (C2C)

Table 3) Coefficients

Coefficients[a]

Model		Unstandardized Coefficients		**Standardized**	t	**Sig.**
		B	Std. Error	**Beta**		
1	(Constant)	2.668	.205		13.040	.000
	Customer-to-customer	.244	.085	.189	2.881	.004

a. Dependent Variable: Affective Response (CCA)

Path 36) Customer-to-customer interaction (C2C) –Referral value (CECR) – Affective Response (CCA)

Table 1) Correlations

Correlations

		Referral value (CECR)	Customer-to-customer interaction (C2C)	Affective Response (CCA)
Referral value (CECR)	Pearson Correlation	1.000	.249**	.320**
	Sig. (2-tailed)		0.000	0.000
	N	225.000	225.000	225.000
Customer-to-customer interaction (C2C)	Pearson Correlation	.249**	1.000	.189**
	Sig. (2-tailed)	0.000		0.004
	N	225.000	225.000	225.000
Affective Response (CCA)	Pearson Correlation	.320**	.189**	1.000
	Sig. (2-tailed)	0.000	0.004	
	N	225.000	225.000	225.000

**. Correlation is significant at the 0.01 level (2-tailed).

Table 2) Model Summary

Model Summary[b]

Model	R	R Square	**Adjusted R Square**	Std. Error of the Estimate	Durbin-Watson
1	.340[a]	.115	**.107**	.92474	1.946

a. Predictors: (Constant), Referral value (CECR), Customer-to-customer interaction (C2C)

b. Dependent Variable: Affective Response (CCA)

Table 3) ANOVA

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	24.749	2	12.375	14.471	**.000**[b]
	Residual	189.840	222	.855		
	Total	214.589	224			

a. Dependent Variable: Affective Response (CCA)

b. Predictors: (Constant), Referral value (CECR), Customer-to-customer interaction (C2C)

Table 4) Coefficients

Coefficients[a]

		Unstandardized Coefficients		**Standardized Coefficients**		
Model		B	Std. Error	**Beta**	t	**Sig.**
1	(Constant)	2.050	0.240		8.530	0.000
	Customer-to-customer	0.151	0.084	0.117	1.796	0.074
	Referral value (CECR)	0.284	0.064	0.291	4.465	0.000

a. Dependent Variable: Affective Response (CCA)

Path 37) Customer-to-customer interaction (C2C) – Influence value (CECI) – Affective Response (CCA)

Table 1) Correlations

Correlations

		Influence value (CECI)	Customer-to-customer interaction (C2C)	Affective Response (CCA)
Influence value (CECI)	Pearson Correlation	1.000	.225**	.427**
	Sig. (2-tailed)		0.001	0.000
	N	225.000	225.000	225.000
Customer-to-customer interaction (C2C)	Pearson Correlation	.225**	1.000	.189**
	Sig. (2-tailed)	0.001		0.004
	N	225.000	225.000	225.000
Affective Response (CCA)	Pearson Correlation	.427**	.189**	1.000
	Sig. (2-tailed)	0.000	0.004	
	N	225.000	225.000	225.000

**. Correlation is significant at the 0.01 level (2-tailed).

Table 2) Model Summary

Model Summary[b]

Model	R	R Square	**Adjusted R Square**	Std. Error of the Estimate	Durbin-Watson
1	.438[a]	.191	**.184**	.88406	2.047

a. Predictors: (Constant), Influence value (CECI), Customer-to-customer interaction (C2C)
b. Dependent Variable: Affective Response (CCA)

Table 3) ANOVA

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	41.081	2	20.540	26.281	**.000**[b]
	Residual	173.509	222	.782		
	Total	214.589	224			

a. Dependent Variable: Affective Response (CCA)
b. Predictors: (Constant), Influence value (CECI), Customer-to-customer interaction (C2C)

Table 4) Coefficients

Coefficients[a]

Model		Unstandardized Coefficients		**Standardized Coefficients**	t	**Sig.**
		B	Std. Error	**Beta**		
1	(Constant)	1.592	0.250		6.373	0.000
	Customer-to-customer	0.127	0.080	0.099	1.592	0.113
	Influence value (CECI)	0.483	0.074	0.405	6.535	0.000

a. Dependent Variable: Affective Response (CCA)

Path 38) Customer-to-customer interaction (C2C) – Knowledge value (CECK) – Affective Response (CCA)

Table 1) Correlations

Correlations

		Knowledge value (CECK)	Customer-to-customer interaction (C2C)	Affective Response (CCA)
Knowledge value (CECK)	Pearson Correlation	1.000	.254**	.363**
	Sig. (2-tailed)		0.000	0.000
	N	225.000	225.000	225.000
Customer-to-customer interaction (C2C)	Pearson Correlation	.254**	1.000	.189**
	Sig. (2-tailed)	0.000		0.004
	N	225.000	225.000	225.000
Affective Response (CCA)	Pearson Correlation	.363**	.189**	1.000
	Sig. (2-tailed)	0.000	0.004	
	N	225.000	225.000	225.000

**. Correlation is significant at the 0.01 level (2-tailed).

Table 2) Model Summary

Model Summary[b]

Model	R	R Square	**Adjusted R Square**	Std. Error of the Estimate	Durbin-Watson
1	.377[a]	.142	**.134**	.91065	2.063

a. Predictors: (Constant), Knowledge value (CECK), Customer-to-customer interaction (C2C)

b. Dependent Variable: Affective Response (CCA)

Table 3) ANOVA

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	30.489	2	15.245	18.383	**.000[b]**
	Residual	184.100	222	.829		
	Total	214.589	224			

a. Dependent Variable: Affective Response (CCA)

b. Predictors: (Constant), Knowledge value (CECK), Customer-to-customer interaction (C2C)

Table 4) Coefficients

Coefficients[a]

Model		Unstandardized Coefficients		**Standardized Coefficients**	t	**Sig.**
		B	Std. Error	**Beta**		
1	(Constant)	2.076	0.224		9.272	0.000
	Customer-to-customer interaction (C2C)	0.134	0.083	0.104	1.617	0.107
	Knowledge value (CECK)	0.298	0.057	0.337	5.242	0.000

a. Dependent Variable: Affective Response (CCA)

C. . Independent T-Test

Table 1) Group Statistics: Engagement Drivers – In-flight characteristics, Customer-to-customer interaction, Brand experience and Brand Love

	Group Statistics					
	Low cost VS Flag		**N**	**Mean**	**Std. Deviation**	**Std. Error Mean**
In-flight characteristics	Air Quality (AAQ)	Low cost	110	3.4939	.50830	.04846
		Flag carrier	109	3.8991	.58003	.05556
	Temperature (AT)	Low cost	110	3.5864	.65878	.06281
		Flag carrier	109	3.8486	.81793	.07834
	Food (AF)	Low cost	110	2.4364	1.12541	.10730
		Flag carrier	109	2.3945	1.01168	.09690
	Overall Layout (AOL)	Low cost	110	2.9364	.94550	.09015
		Flag carrier	109	3.7431	1.05666	.10121
	Classes on the plane (ACP)	Low cost	110	3.3682	1.12249	.10703
		Flag carrier	109	2.4495	1.02276	.09796
	Crew (AC)	Low cost	110	3.8955	.78794	.07513
		Flag carrier	109	4.0986	.91857	.08798
	Odour (AO)	Low cost	110	3.7424	.57939	.05524
		Flag carrier	108	4.0123	.66186	.06369
	Noise (AN)	Low cost	110	3.4045	.90233	.08603
		Flag carrier	109	3.9450	.76479	.07325
-	Customer-to-customer interaction (C2C)	Low cost	110	2.2341	.74060	.07061
		Flag carrier	109	2.3440	.78895	.07557
Brand Experience	Sensory (BES)	Low cost	110	3.0636	.73571	.07015
		Flag carrier	109	3.5199	.90657	.08683
	Affective (BEA)	Low cost	110	2.6182	.79350	.07566
		Flag carrier	109	3.2783	.91458	.08760
	Intellectual (BEI)	Low cost	110	2.6030	.65041	.06201
		Flag carrier	109	2.9480	.73447	.07035
	Behavioural (BEB)	Low cost	110	2.6515	.70006	.06675
		Flag carrier	109	2.9602	.80600	.07720
-	Brand Love (BL)	Low cost	110	2.5420	.70427	.06715
		Flag carrier	109	3.0049	.86004	.08238

Table 2) Group Statistics: Engagement and Engagement outcome – Co-creation

	Group Statistics					
	Low cost VS Flag		**N**	**Mean**	**Std. Deviation**	**Std. Error Mean**
Co-creation	Meaningfulness (CCM)	Low cost	110	2.4309	.75526	.07201
		Flag carrier	109	2.8569	.92899	.08898
	Collaboration (CCC)	Low cost	110	2.8127	.70712	.06742
		Flag carrier	109	3.2844	.85431	.08183
	Contribution (CCCon)	Low cost	110	2.8036	.82261	.07843
		Flag carrier	109	3.3028	.86821	.08316
	Recognition (CCR)	Low cost	110	2.8309	.93933	.08956
		Flag carrier	109	3.2257	.93536	.08959
	Affective response (CCA)	Low cost	110	2.9891	.91264	.08702
		Flag carrier	109	3.4954	.99688	.09548
Consumer engagement	Lifetime value (CECL)	Low cost	110	3.4773	.83470	.07959
		Flag carrier	109	3.6193	.92896	.08898
	Referral value (CECR)	Low cost	110	3.0364	.96131	.09166
		Flag carrier	109	2.8532	1.05476	.10103
	Influence value (CECI)	Low cost	110	2.6318	.72766	.06938
		Flag carrier	109	2.9656	.87564	.08387
	Knowledge value (CECK)	Low cost	110	2.6682	.99489	.09486
		Flag carrier	109	2.9954	1.20952	.11585

Table 3) Independent Samples T-Test for in-flight characteristics

Independent Samples Test

			Levene's Test for Equality of Variances		t-test for Equality of Means						
			F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
										Lower	Upper
In-flight characteristics	Air Quality (AAQ)	**Equal variances assumed**	**2.082**	**.150**	**-5.499**	**217**	**.000**	**-.40514**	**.07368**	**-.55036**	**-.25992**
		Equal variances not assumed			-5.495	212.810	.000	-.40514	.07372	-.55047	-.25982
	Temperature (AT)	**Equal variances assumed**	**3.437**	**.065**	**-2.614**	**217**	**.010**	**-.26226**	**.10032**	**-.45998**	**-.06454**
		Equal variances not assumed			-2.612	206.804	.010	-.26226	.10041	-.46023	-.06429
	Food (AF)	**Equal variances assumed**	**1.941**	**.165**	**.289**	**217**	**.773**	**.04187**	**.14465**	**-.24324**	**.32697**
		Equal variances not assumed			.290	214.977	.772	.04187	.14458	-.24311	.32685
	Overall Layout (AOL)	**Equal variances assumed**	**.084**	**.772**	**-5.955**	**217**	**.000**	**-.80676**	**.13547**	**-1.07376**	**-.53975**
		Equal variances not assumed			-5.952	213.929	.000	-.80676	.13554	-1.07392	-.53960
	Classes on the Plane (ACP)	**Equal variances assumed**	**2.181**	**.141**	**6.329**	**217**	**.000**	**.91864**	**.14515**	**.63255**	**1.20473**
		Equal variances not assumed			6.332	215.492	.000	.91864	.14509	.63266	1.20462
	Crew (AC)	**Equal variances assumed**	**1.141**	**.287**	**-1.757**	**217**	**.080**	**-.20317**	**.11561**	**-.43104**	**.02470**
		Equal variances not assumed			-1.756	211.499	.081	-.20317	.11569	-.43123	.02489
	Odour (AO)	**Equal variances assumed**	**.019**	**.891**	**-3.206**	**216**	**.002**	**-.26992**	**.08421**	**-.43589**	**-.10395**
		Equal variances not assumed			-3.202	211.212	.002	-.26992	.08431	-.43612	-.10373
	Noise (AN)	Equal variances assumed	6.586	.011	-4.779	217	.000	-.54041	.11308	-.76328	-.31753
		Equal variances not assumed			**-4.783**	**211.920**	**.000**	**-.54041**	**.11300**	**-.76315**	**-.31767**

Table 4) Independent Samples T-Test for Customer-to-customer interaction

Independent Samples Test

			Levene's Test for Equality of Variances		t-test for Equality of Means						
			F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
										Lower	Upper
Customer-to-customer	Customer-to-customer interaction (C2C)	**Equal variances assumed**	**1.284**	**.258**	**-1.063**	**217**	**.289**	**-.10995**	**.10339**	**-.31373**	**.09384**
		Equal variances not assumed			-1.063	215.871	.289	-.10995	.10342	-.31380	.09391

Table 5) Independent Samples T-Test for Brand Experience

Independent Samples Test

			Levene's Test for Equality of Variances		t-test for Equality of Means						
			F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
										Lower	Upper
Brand Experience	Sensory (BES)	**Equal variances assumed**	**6.161**	**.014**	**-4.091**	**217**	**.000**	**-.45624**	**.11152**	**-.67605**	**-.23643**
		Equal variances not assumed			-4.087	207.427	.000	-.45624	.11163	-.67631	-.23617
	Affective (BEA)	**Equal variances assumed**	**2.162**	**.143**	**-5.707**	**217**	**.000**	**-.66011**	**.11567**	**-.88809**	**-.43212**
		Equal variances not assumed			-5.703	212.216	.000	-.66011	.11575	-.88827	-.43194
	Intellectual (BEI)	**Equal variances assumed**	**.913**	**.340**	**-3.681**	**217**	**.000**	**-.34498**	**.09373**	**-.52972**	**-.16025**
		Equal variances not assumed			-3.679	213.390	.000	-.34498	.09378	-.52984	-.16013
	Behavioural (BEB)	Equal variances assumed	3.279	.072	-3.027	217	.003	-.30873	.10199	-.50975	-.10771
		Equal variances not assumed			**-3.025**	**212.282**	**.003**	**-.30873**	**.10206**	**-.50990**	**-.10756**

Table 6) Independent Samples T-Test for Brand Love

Independent Samples Test

			Levene's Test for Equality of Variances		t-test for Equality of Means						
			F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
										Lower	Upper
Brand Love	Brand Love (BL)	Equal variances assumed	5.047	.026	-4.360	217	.000	-.46298	.10618	-.67226	-.25370
		Equal variances not assumed			**-4.356**	**208.150**	**.000**	**-.46298**	**.10628**	**-.67250**	**-.25346**

Table 7) Independent Samples T-Test for Co-Creation

Independent Samples Test

			Levene's Test for Equality of Variances		t-test for Equality of Means						
			F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
										Lower	Upper
Co-creation	Meaningfulness (CCM)	Equal variances assumed	7.364	.007	-3.725	217	.000	-.42597	.11436	-.65137	-.20057
		Equal variances not assumed			**-3.721**	**207.572**	**.000**	**-.42597**	**.11447**	**-.65164**	**-.20030**
	Collaboration (CCC)	Equal variances assumed	4.332	.039	-4.453	217	.000	-.47168	.10594	-.68047	-.26288
		Equal variances not assumed			**-4.449**	**208.981**	**.000**	**-.47168**	**.10603**	**-.68069**	**-.26266**
	Contribution (CCCon)	**Equal variances assumed**	**.521**	**.471**	**-4.367**	**217**	**.000**	**-.49912**	**.11428**	**-.72436**	**-.27387**
		Equal variances not assumed			-4.366	216.140	.000	-.49912	.11431	-.72442	-.27381
	Recognition (CCR)	**Equal variances assumed**	**.117**	**.732**	**-3.116**	**217**	**.002**	**-.39478**	**.12668**	**-.64446**	**-.14509**
		Equal variances not assumed			-3.116	216.995	.002	-.39478	.12668	-.64446	-.14510
	Affective response (CCA)	**Equal variances assumed**	**3.136**	**.078**	**-3.921**	**217**	**.000**	**-.50632**	**.12913**	**-.76084**	**-.25180**
		Equal variances not assumed			-3.919	214.969	.000	-.50632	.12919	-.76096	-.25169

Table 8) Independent Samples T-Test for Consumer engagement

Independent Samples Test

			Levene's Test for Equality of Variances		t-test for Equality of Means						
			F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
										Lower	Upper
Consumer engagement	Lifetime value (CECL)	**Equal variances assumed**	**1.644**	**.201**	**-1.190**	**217**	**.235**	**-.14199**	**.11932**	**-.37717**	**.09318**
		Equal variances not assumed			-1.189	214.133	.236	-.14199	.11938	-.37730	.09331
	Referral value (CECR)	**Equal variances assumed**	**3.040**	**.083**	**1.343**	**217**	**.181**	**.18315**	**.13635**	**-.08559**	**.45190**
		Equal variances not assumed			1.343	214.781	.181	.18315	.13641	-.08572	.45203
	Influence value (CECI)	**Equal variances assumed**	**2.304**	**.130**	**-3.069**	**217**	**.002**	**-.33378**	**.10876**	**-.54813**	**-.11942**
		Equal variances not assumed			-3.066	209.280	.002	-.33378	.10885	-.54836	-.11920
	Knowledge value (CECK)	Equal variances assumed	6.755	.010	-2.187	217	.030	-.32723	.14960	-.62209	-.03238
		Equal variances not assumed			**-2.185**	**208.500**	**.030**	**-.32723**	**.14973**	**-.62241**	**-.03205**