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**THE MEDIATING ROLE OF CUSTOMER SATISFACTION**

**IN THE RELATIONSHIP BETWEEN**

**CUSTOMER-BASED BRAND EQUITY AND BRAND LOYALTY**

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**MSc Management with Business Analytics**

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**Under the supervision of Dr Jens Mohrenweiser**

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**ABSTRACT**

In today’s competitive world, companies are constantly providing their customers with new options, coming up with new ways to try and attract customers as much as possible. Therefore, it is pivotal to build a brand loyalty customer base in today’s market. To make customers become faithful to their own product or service, companies should invest in establishing a high customer satisfaction base that can be optimized by brand equity. As a result, this research investigates the mediating effects of customer satisfaction on the relationship between consumer-based brand equity and brand loyalty. The research model mainly uses Aaker's brand equity model, including 4 key dimensions - brand awareness, brand association, perceived quality and price premium, yields particular insight into the relationship between brand equity and customer satisfaction, then brand loyalty. The results of this research have implications for understanding and measuring the dimensions of brand equity to develop strategies to optimize customer satisfaction and brand loyalty.

The research model is investigated through a positivist research philosophy and based on a quantitative research method. In particular, a secondary data set of European customer-based brand equity with a sample of 1512 customers has been used. The findings are explored in two distinct statistical methods - Linear Mediation Model and Structural Equation Modelling. Their results are compared and used for confirming or rejecting the established hypotheses. While customer satisfaction has no mediating effects on the relationship between brand awareness and brand loyalty, it positively mediates the impacts of three other dimensions on customer loyalty towards the brand. Finally, the implications, limitations, recommendations and suggestions for further research are all mentioned in the conclusion chapter of the dissertation.

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# CHAPTER I: INTRODUCTION

## 1.1. Research background

In the modern world, companies and manufacturers have concentrated more on brand loyalty that is defined as a customer’s willingness and desire to repeatedly purchase products or services from them rather than changing to other brands (Carpenter 2016). According to Taylor et al. (2004) and Stewart (2019), brand loyalty plays an imperative role in growing a business because of at least four main reasons as follows: First, loyal customers tend to spread the word about the brand and share their positive feedback with others, which creates an efficient and highly persuasive word-of-mouth marketing. Second, loyal customers spend 67% more on products and services than new customers (Becker 2019); therefore, returning customers help a business increase its revenue. The tendency of spending more for the same products or service can stem from a sense of trust that the customers have gained after using their preferred brand over time. Third, customer’s loyalty upon a brand helps it defend against its competitors; essentially, the amount customers pay to buy products and services of a brand is equivalent to the potential revenue its competitors lost. Finally, because loyal customers like and desire their favoured brand to improve and develop, they share valuable feedback that a brand can take advantage of as actionable marketing tactics. In general, it is essential to understand the essences of brand loyalty and measure the impacts on this marketing concept.

According to Gallimore (2020), customer loyalty is normally known as the way customers are satisfied with the brand they frequent. In other words, customers will stay with a brand if it satisfies their expectations over the long term. In fact, businesses strive to maximize their customers’ satisfaction because they are conscious that the fulfilments will retain customers. Also, consumers’ demands increasing makes them more powerful and brings with them competitive advantages to compete with competitors for their market share (Commer et al. 2015). In the research of Srivastava (2015), it is distinguished that customer satisfaction reflects their attitude towards a brand’s products or services, while customer loyalty is a behaviour. Customer satisfaction is a conditional base leading to re-purchasing behaviour of a customer. To better maximize the satisfaction level of customers, it is necessary to pay more attention to the factors that influence customer satisfaction, including brand equity (Torres and Tribó 2011). In other words, it is important to determine a company’s efforts to build brand equity in order to develop positive customer perception, boost customer satisfaction and achieve their loyalty (Susanty and Kenny 2015).

Like any other assets such as finance, investment, human resources, research and development, information technology and other resources, brand equity is known as one of essential resources contributing to the success of an organisation (Olins 2010). Particularly, brand equity is known as a strategic marketing method for a firm to develop sustainable targets and raise competitive advantages in the market (Sze 2012). According to Cobb-Walgren et al. (1995), a company with higher brand equity levels has more advantages in creating customer preferences and impacting on their buying behaviour and purchase intentions. Regarding financial perspectives, brand equity helps the business get better stock returns (Aaker and Jacobson 1994) and enhance its sales and profit (Sze 2012). In addition, if a company manages its brand equity brilliantly, it has a good opportunity to extend its market share in the industry, reduce promotional pressures from its competitors and build barriers to entry that are understood as obstacles preventing new competitors from freely entering the same industry (Farquhar 1989).

In the mid 1960's, Kenvin Lane Keller was the first researcher formally introducing the term of brand equity to the public (Commer et al. 2015). Until the 1980s, other academic scholars announced the discoveries of the impacts of brand equity on customer satisfaction (Lanza 2008). Afterwards, the understanding of customer satisfaction has been widely known and then became one of the most pivotal targets of business marketing strategies (Hansemark & Albinsson 2004). This marketing term has been usually attached with brand loyalty or customer loyalty. In a research of Bennett and McColl-Kennedy (2005), they mentioned that brand loyalty could be seen as a marketing phenomenon and had typical associations with customer satisfaction.

The conceptualizations of brand equity, customer satisfaction and brand loyalty have attracted attention from researchers. One of popular topics related to three terms is investigating the relationship between brand equity and loyalty with customer satisfaction as a mediating factor. For example, the model of Nam, Ekinci and Whyatt (2011) utilized the dimensions of consumer-based brand equity including physical quality, staff behaviour, ideal self-congruence, brand identification, and lifestyle congruence. These elements were demonstrated to exist significant effects on brand loyalty through a mediator - customer satisfaction. In the research of Lei and Chu (2015), the authors used the brand equity consisting of perceived quality, perceived value of cost and price premium to confirm the significant effects of customer satisfaction on the relationship between the dimensions of brand equity and loyalty. It can be clearly seen that there are a wide range of the ways to represent the structure of brand equity. However, there has been only a limited number of studies using Aaker’s models to evaluate the mediating effects of consumer satisfaction on the relationship between brand equity and brand loyalty. Aaker’s models mainly divide brand equity with five dimensions, including brand loyalty, brand awareness, perceived quality, brand association, and other proprietary brand assets. In this paper, brand loyalty is examined as a dependent variable that is under the effects of brand equity instead of an independent factor belonging to brand equity. In addition, price premium is mentioned as indicative of a brand's strength, therefore, it is used as a dimension of brand equity in this dissertation. In short, this research is one of the few studies that use Aaker’s brand equity model as a standard theoretical framework to examine the mediating role of customer satisfaction.

## 1.2. Research aim and objectives

### 1.2.1. Research aim

The aim of this research is to investigate the mediating role of customer satisfaction on the impacts of customer-based brand equity on brand loyalty.

### 1.2.2. Objective

The objectives of the research are to:

* Understand the academic literature and information of Brand Equity, Customer Satisfaction and Brand Loyalty, including their academic conceptualizations, role and forming structure.
* Identify the relationship between brand equity and its dimensions, the direct effect of brand equity on customer satisfaction, and the indirect one through customer satisfaction.
* Examine the mediating effect of customer satisfaction on the relationship between brand equity and brand loyalty
* Propose some recommendations for organisations to apply brand equity’s understanding in order to improve their customer’s experience and loyalty. Simultaneously, the paper is to provide suggestions for the future studies to address research limitations.

# CHAPTER II: LITERATURE REVIEW

## 2.1. Introduction

The paper’s aim is to comprehensively understand how customer satisfaction mediates the effect of consumer-based brand equity dimensions, namely brand awareness, brand associations, perceived value and price premium, on brand loyalty. Hence, it is essential to review previous academic research, then determine the definition, attributes and structures of the key terms related to the chosen topic. This second chapter includes six sectors which begin with the concept of the outcome variable - brand loyalty. This part reflects the most important content in the research because brand loyalty is the core element in the research framework and helps to develop the others. The next four sections are to analyse four components of brand equity, including brand awareness, brand associations, perceived value, price premium. The interpretations about their conceptualization, quality and structure are proposed based on the prestigious studies. It is necessary to compare and distinguish these concepts because they are reliable foundations for the next chapter when determining corresponding data. Customer satisfaction is also mentioned in detail by credible scholars. Afterward, the sixth section aims to build a conceptual framework for hypotheses that predict the correlation between two variables; at the same time, determine the limitations of previous academic studies to assert the necessity of the new investigation. Finally, the complete research model is proposed to clarify the process of this literature review chapter.

## 2.2. Brand Loyalty

Brand loyalty is considered as the result of customer satisfaction and both are essential goals for business’s success in today’s economic world (Gremler, Gwinner, & Brown 2001). The concept of brand loyalty has been examined in several ways after the first research of Copeland published in 1923. Aaker (1991) regarded brand loyalty as a measurement of the extent to which a customer can be likely to exchange a brand for another one because of its change regarding price or product/service features. Aaker (1991) emphasized that brand loyalty allows a business to significantly reduce marketing costs and leverage trade. Principally, the cost of retaining an old customer is much less than one of attracting a new customer. Also, it is a barrier for competitors to communicate and attract the brand’s loyal customers because they have little motivation to experience and learn about a new brand’s product or service.

Similarly, brand loyalty is “a function of psychological process” (Mellens et al. 1996); reflects the attachment of a customer with a brand (Keller 1991). According to Oliver (1997), loyalty is argued as “a deeply held commitment to re-buy or re-patronize a preferred product or service consistently in the future”; simultaneously, making the decisions of repetitive same brand buying without being impacted by any situation or marketing efforts to cause switching behaviour of competitors. Generally, there are two factors highlighted when referring to the definition of brand loyalty: “an attained state of enduring preference” and “the point of determined defense” (Gill and Dawra 2010). The former focuses on a customer’s repetitive product or service purchasing behaviour, the latter presents that the customer defends himself from the strong attractiveness from the incentives and price promotions of other providers. Additionally, price premium has been mentioned as a factor influencing the “determined defense” component. Brand price measures the amount a customer is willing to pay for the brand instead of another brand, in spite of the similar benefits offered by two brands in the comparison (Chaudhuri and Holbrook 2001).

Investing and developing customer loyalty is one of the most important strategies driving a firm’s success because it is able to increase revenue and profits based on the benefits of repetitive patronage, less price sensitivity, and word-of-mouth effect (Jones and Sasser 1995). Consistent loyalty of a satisfied customer is considered as an essential determinant that helps a corporation to create a massive competitive advantage in the market and encourage tremendously its worker’s productivity, thereby improving the whole business performance (Lam et al. 2004). Nonetheless, once customer loyalty towards the brand is negatively affected, the consequences devastating the company’s performance would occur (Lee and Cunningham 2001).

In this research, the definition of brand loyalty has been investigated separately as a factor that is influenced by brand equity instead of the sub-dimension of brand equity. It can be interpreted that brand loyalty is a merely behavioural feature of purchasing repeatedly a product or service of the same manufacturer, compared with brand equity that reflects general prosperous benefits that may not entail repeat buying act (Taylor, Celuch, & Goodwin 2004). So this behavioural concept should be one of the consequences of brand equity rather than a component forming it. Brady, Jr, Fox, and Roehm (2008) also considered brand loyalty individually because brand equity is known as “a perception of belief”, not implying any specific action, whereas brand loyalty or customer’s commitment focus on re-purchasing intent. In short, brand loyalty is considered as an outcome variable explained by four different dimensions of customer-based brand equity and one mediator - customer satisfaction. The mechanisms of the effects of these independent variables and mediator on brand equity are detailed in the following sections.

## 2.3. Customer-Based Brand Equity

The term “brand equity” has appeared since the 1980s and become one of the most important concepts in the business marketing field (Susanty and Kenny 2015). Researchers have approached its definition and measurement in many different ways. There are three principal perspectives classified to study brand equity. The first perspective of brand equity is a customer-based perspective that demonstrates the customer’s response to a brand name (Aaker 1991, Keller 1993, Shocker et al. 1994). The others are the financial perspective - considers brand equity as the financial value that a brand gains from customers while they respond to its marketing (Farquhar et al. 1991, Simon and Sullivan 1990) and the combined perspective (Anderson 2007). Because brand equity is mostly perceived from the customers’ viewpoint, familiar with their personal aspects and reminds strongly and favorably in their mind (Byrne, Shavelson and Muthén 1989), the dissertation is concentrated on customer-based brand equity (CBBE) and mainly based on the model of Aaker (1991).

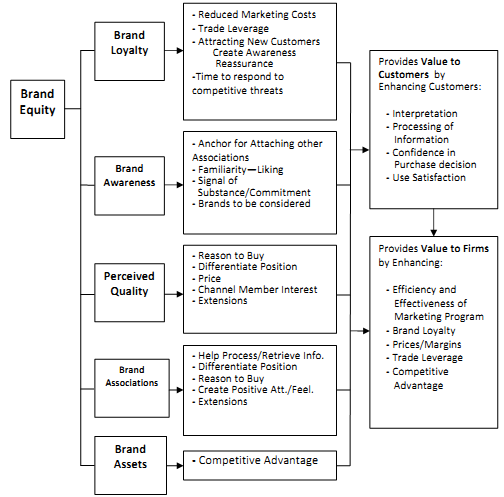


Figure 1. Aaker’s Brand Equity Model (Aaker 1991)

Aaker (1991) determined CBBE as “A set of brand assets and liabilities linked to a brand, its name and symbol that add or subtract from the value provided to a firm and/or to that firm’s customers”. In his model, brand equity is equated with five dimensions including brand loyalty, brand awareness, perceived quality, brand association, and other proprietary brand assets. While brand loyalty focuses on the performance of the business such as reducing marketing costs, improving trade operating leverage and creating competitive advantages; brand awareness, brand association and perceived quality mainly help differentiate the brand, improve customer perception towards the brand and brand extensions. This model is utilized to understand the relation between a brand’s equity and every dimension of brand equity, then determine appropriate actions for future performance of the brand. The similar method to capture customer-based brand equity can be seen in the studies of Yoo and Donthu (2001), and Washburn and Plank (2002) while they evaluated CBBE through four main elements: brand loyalty, brand awareness, perceived quality, and brand association. The dimension of other proprietary brand assets is absent because it is not applicable to customer-based brand equity (Washburn and Plank 2002). Other proprietary brand assets literally are related to patents, trademarks and channel relationships which allow a brand to create strong competitive advantages to win its competitors (Moisescu 2005). These assets are actually irrelevant to the cognitive and behavioural brand equity at the customer level, therefore, this dissertation also conceptualizes customer-based brand equity according to the model from Aaker (1991) without the dimension of the other proprietary brand assets.

Beside the theory of Aaker (1991), Keller’s model (1993) was recognized as one of two most detailed and widely accepted frameworks (Commer et al., 2015).

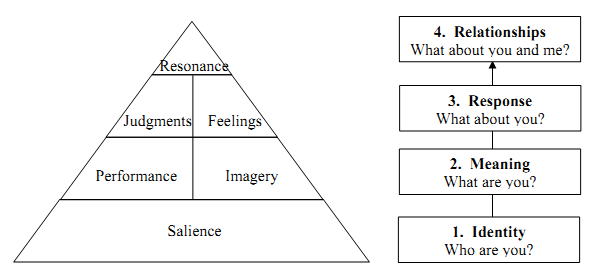


Figure 2. Keller’s Brand Equity Pyramid (Keller 1993)

Keller’s customer-based brand model (1993) emphasizes the comparison in the customer response to the brand’s marketing programs with the similar programs of unnamed versions of the same level of product features. It also highlights the importance of brand awareness and brand image in building customer perceptions and preferences (Ahmad and Sherwani 2015). In Keller’s model (1993), CBBE is captured through four steps. First, brand salience is determined as the awareness of the brand that refers to the customer's ability to recall and recognize the brand. Second step is to establish brand meaning by linking tangible and intangible brand associations. Third step represents opinions and judgements about overall quality, credibility, consideration and superiority of the brand based on associations identified in brand meaning. Final one is where an intense loyalty relationship between customers and the brand is created through brand response.

Besides, other outstanding scholars have developed the term of CBBE. To illustrate, Lassar, Mittal, and Sharma (1995) determine brand equity as the marketing strategy of increasing the utility and desirability that customer perceives from the product of a brand. Christodoulides and de Chernatony (2010) had additional opinions that CEEB helps a brand earn greater volume and margins than it could without the brand. In short, customer-based brand equity allows a business to build a strong brand that can shape positive thoughts, beliefs, attitudes and perceptions in its customers’ mind. This marketing tool enhances a firm’s business performance based on customer’s preferences and buying behaviour.

### 2.3.1. Brand Awareness

Brand awareness or name awareness is a crucial dimension measuring almost all brand equity models. According to Aaker (1991), brand awareness refers to “the ability of a potential buyer to recognize or recall that a brand is a member of a certain product category”. Brand recognition and recall determine the extent to which a person is able to respectively recognize and remember a brand from given sets of brands through a sense of the familiarity (Gill and Dawra 2010). In the 1996’s version, besides brand recognition and recall, Aaker re-defined brand awareness with other higher levels, including top-of-mind, brand dominance, brand knowledge and brand opinion. Top-of-mind and recall are sensitive and helpful for popular brands, meanwhile, recognition is necessary for a new brand (Farjam and Hongyi 2015). Brand knowledge and brand opinion are used in order to support the measurement of brand recall (Chieng 2011). According to Washburn and Plank (2002), Aaker built brand awareness before brand association in the brand equity’s priority because a customer must be aware of a brand first then create a set of associations related to this brand by actual experiences.

Brand awareness has a significant effect on customer satisfaction and brand loyalty. In particular, customers tend to have a quick response in deciding to purchase a product if they know or realize its brand. They are also more likely to be satisfied with a brand if they have more of a sense of familiarity through reliable references from friends, relatives or advertising (Ahmad and Sherwani 2015, Sasmita and Mohd Suki 2015). In terms of the mechanism of how brand awareness affects brand loyalty, according to Alkhawaldeh et al. (2017), customers tend to be loyal towards a brand only when they are assured of its product. As a result, brand awareness has a strong association with brand loyalty when brand awareness plays a role in keeping positive brand information in the mind of customers (Aaker 1996, Kim & Kim 2005). In other words, the higher brand awareness of customers, the stronger degree of brand loyalty becomes.

Beside Aaker (1991), Keller (1992), Kapferer (1991), Agarwal and Rao (1996) and Mackay (2001) also identified brand awareness as a foundational determinant of brand asset that presents brand attitude and image in customer’s mindset. The model of Keller (1992) also defined the term of brand awareness as “the customers’ ability to recall and recognize the brand as reflected by their ability to identify the brand under different conditions and to link the brand name, logo, symbol, and so forth to certain associations in memory”. Similarly, according to Agarwal and Rao (1996), brand awareness is evaluated through self-reliant recall and familiarity. In other words, it can be understood that brand awareness seems to be operating based on brand retrieval (Holden 1993). These kinds of awareness make a brand become more familiar with the customers, as a result, have a remarkable influence on their brand choice and generate more sales as well. Additionally, developing brand awareness is a strategy of enhancing sustainable competitive advantages for a business because brand awareness can add value by setting the brand’s place in the customer’s mind, operating as a barrier for new competitors to entry, reassuring the company’s product perceived quality and finally, creating leverage in the distribution channels (Macdonald and Sharp 2003).

The studies on the brand awareness’s effect on customer satisfaction and brand loyalty have existed in many research, such as by Aaker (1996), Kim & Kim (2005), Rubio et al. (2014), Kameswara Rao Poranki (2015), Alkhawaldeh et al. (2017). Therefore, the following hypotheses are formulated:

***H1: Brand Awareness has a positive effect on Consumer Satisfaction***

***H6a: Brand Awareness has a positive effect on Brand Loyalty***

### 2.3.2. Brand Association

Brand association is concluded in the research on brand equity of Christodoulides and de Chernatony (2010) as the most important part of CBBE. In Aaker’s model (1991), brand associations are described as “anything linked in memory to a brand”. In particular, customers’ brains store their knowledge of a brand as the pieces of brand information that would be connected together to create complicated associations related to the brand.

Brand associations positively influence brand customer satisfaction and brand loyalty. Indeed, Aaker (1991) divided brand association into different aspects such as product attributes, customer benefits, uses, users, life-styles, product classes, competitors and countries. Brand association shows the importance and attachment of customers towards the brand, provides a reason to buy and stimulates positive feelings. Thus, it is easy to find that customers are likely to be satisfied with their preferred brands. In addition, Aaker (1991) also emphasized that brand associations have relative impacts on brand loyalty. Particularly, the associations with a brand could be attached with some meanings and then the impression on these meanings, as a result, could establish a brand image in the customer's mind. Principally, that the higher positive brand image in the product is more likely to be remembered by the customers and gain loyalty towards the brand from them (Pouromid and Iranzadeh 2012).

Regarding the definition of brand association, Keller (1993) defined this term as a process of recalling brand knowledge from memory, or the chain of the informational nodes linked to the brand node in customer’s mind. Additionally, Krishnan (1996) shared the same opinion with the argument that association reflects internal and external characteristics of a brand or a product; simultaneously, links these reflections as a node to another one in customer’s memory. According to Chen (2010), CBBE is basically formatted from the customer viewpoint based on the brand associations held in their cognitive system. Therefore, there are no considerable differences amongst the concept of brand association amongst different scholars.

Academic literature on branding tends to separate brand awareness and brand associations; however, they have a remarkable correlation (Aaker 1991; Washburn & Plank 2002). Tuominen (1999) concluded that brand awareness reflects the ability of a potential customer to recall or identify a brand; whereas, brand association is described as any mental linkage to the brand and reflects its importance and attachment in customers’ mind. Moreover, both components impact customers’ subsequent purchasing decisions because stimulating positive attitudes and feelings towards the product is the foundation for brand expansion (Widjaja 2019). Several studies examined the relationship between brand awareness and associations through a general term - brand familiarity. According to Baker et al. (1986), positive brand associations are formed by increasing customers’ familiarity with the brand. Meanwhile, brand awareness is improved when the brand’s consumers have enough time to get familiarity and favourability with the brand through their experiences with its products. Consequently, there exists a significant relationship between brand awareness and brand associations.

There are many scholars proving that brand association has a strong positive relationship with customer satisfaction and brand loyalty, such as Bridges et al. (2000), Yoo et al. (2000), Belén del Río et al. (2001), van Osselaer and Janiszewski (2001), Ye and van Raaij (2004), Romaniuk and Sharp (2004), Hu et al. (2012), Pouromid and Iranzadeh (2012), Jayswal and Vora (2019). Also based on the above arguments, it is credible to develop the hypotheses as follows:

***H2: Brand Association has a positive effect on Consumer Satisfaction***

***H6b: Brand Association has a positive effect on Brand Loyalty***

### 2.3.3. Perceived Quality

Perceived quality is widely accepted as a key facet in the frameworks of customer-based brand equity. According to Aaker (1991), it is conceptualized as a consumer’s judgements on a product or service’s overall esteem, excellence or superiority in respect of its intended purpose, in comparison with other given alternatives. In addition, Aaker also showed that perceived quality is a marketing management practice that provides a reason to buy, differentiate the brand, extend the brand base, attract member interest and support a higher price.

Other scholars shared the same opinion with Aaker about the term of perceived quality. In particular, perceived quality is viewed as a result of a consumers’ experience process including sight, sound, touch, scent (Stylidis, Wickman and Söderberg 2019), it reflects their opinion and impression on the extent to which the product can be able to meet their expectations (Gill and Dawra 2010). it can be considered as a kind of brand association that helps to elevate the status of brand equity (Keller 1992; Gordon, di Benedetto and Calantone 1994; Pappu and Quester 2006) and possesses a higher abstraction level than other dimensions of brand equity (Alhaddad 2015). In the scope of practical business performance; firstly, perceived quality can drive financial performance while contributes to a company’s return on investment, enhances stock return and market share (Fornell 1992; Roumeliotis and Ihalainen 2011); secondly, perceived quality is considered as the end goal of total quality management strategies (TQM) that set quality to be central of many companies in order to develop their sustainable competitive advantage in the long-term (Aaker 2009).

Regarding the way that perceived quality affects customer satisfaction and brand loyalty, the mechanism was also investigated in many prestigious marketing research by Aaker (1991), Kamakura and Russell (1991), Campbell and Stanley (2011), Rita et al. (2019). Firstly, perceived quality plays a great role in enhancing customer satisfaction. In the view of McDougall and Levesque (2000), customers desire to optimize the value of a product or service relative to the amount they pay. It means that when a customer perceives his benefits much more than the expenditure, he feels satisfied (Zeithaml 1988). Secondly, perceived quality is considered as a strong predictor of brand loyalty. It is literally because the consumer’s experiences related to a product’s quality have a high association with brand choice, purchasing behaviour and loyalty intention (Aaker, 1996; Dyson et al., 1996; Farquhar, 1989); it means customers tend to repeatedly purchase a brand’s products if they find that the products’ quality gives them the most satisfaction. In other words, the higher the customers’ subjective satisfaction at the comprehensive quality of a product or service, the higher their loyalty level towards its brand (Hu et al. 2012). As a result, the following hypotheses are posited:

***H3: Perceived Quality has a positive effect on Consumer Satisfaction***

***H6c: Perceived Quality has a positive effect on Brand Loyalty***

### 2.3.4. Price Premium

Price premium, although not appearing in the formal model of Aaker (1991), is still mentioned in his article "Measuring Brand Equity Across Products and Markets" as is the most useful and profitability driving measure of brand equity (Aaker 1996). In particular, Aaker defined the price premium as the extent that a customer is willing to pay higher for a brand’s products or services than the sum they want to pay for similar alternatives. Also, he stated that price premium is indicative of the power of a brand. It is because the price premium represents a more positive attitude and behaviour towards the brand than its competitions. In other words, this term is considered as a global measure to explain and capture the stability of a brand’s health based on individual level and market shares as well.

Other scholars have also similar opinions with Aaker about the definition and essence of price premium. For example, Anselmsson et al. (2007) and Sethuraman (2002) argued that price premium is the sum consumers are willing to pay for a brand, compared to other relevant brands, and can be either negative or positive. In a similar way, according to Agarwal and Rao (1996) and Ailawadi et al. (2003), price premium reflects an additional amount of money a customer wants to pay for a brand’s product to use, instead of the other ones. Consequently, a premium pricing strategy demonstrates a firm’s advantage in market share, helps a business to gain higher profit margins, and creates tougher entry barriers for competitors (Woodruff 2019). In addition, it is also a necessary method to create more values for shareholders (Ambler 2001).

Price premium can be considered as a dimension of customer-based brand equity in this dissertation because it reflects fundamental characteristics of customer-based brand equity. Particularly, brand equity demonstrates how consumers perceive, feel, evaluate, compare, react about a brand compared to other competitors in the market. With price premium, it reflects the way customers respond to the price of a brand’s product. Existing research also investigated price premium as an important component of customer-based brand equity, such as Anselmsson et al. (2007), Hofer et al. (2008) and Sharma (2015). As other dimensions, price premium also positively affects customer satisfaction and brand loyalty. First, a firm uses a premium pricing strategy to create the perception that its products have a higher quality and bring more values to customers (Woodruff 2019). A high priced product may signal that the products are well-made or of good quality, which attracts customers (Melanie 2017) and fulfils their expectations (Razak et al. 2016). However, it is necessary to emphasize that a higher priced product must be accompanied by actual higher product quality. Second, because customers care about the difference between the amount they pay for a product and what they perceive from it, they are more likely to stick with a brand if it ensures product quality increases in tandem with price (Nisa 2019). The price increase is a sign of continuous investment and development, optimizing quality to maximize consumers’ expectations (Xia et al., 2004). The following hypothesis can be formulated:

***H4: Price Premium has a positive effect on Consumer Satisfaction***

***H6d: Price Premium has a positive effect on Brand Loyalty***

## 2.4. Customer Satisfaction

Customer satisfaction is determined as the core target for most companies to achieve (Jones and Sasser 1995) and the heart of their marketing strategies (Gomez et al. 2004). Satisfaction was defined as the result of judging the consumption experience that can be as good as or higher than it was supposed to be (Hunt 1977). Besides, customer satisfaction has been regarded as an “overall customer attitude” on a firm's product or service (Levesque and McDougall 1996) or a subjectively emotional reaction towards the gap between consumers’ anticipation and the actual values they receive, in regard to the satisfaction of need, goal, or desire (Hansemark and Albinsson 2004). In short, customer satisfaction illustrates the degree to which a consumer is fulfilled, which impacts his repurchasing behaviour (Burns and Neisner 2006). The less the difference between expectations and perceptions of a product or service, the higher the opportunity of a consumer revisiting the particular provider for the next purchase (Lai and Babyn 2009).

Customer satisfaction is believed to bring many advantages to a firm (Chan et al. 2003). Firstly, regarding financial aspects, customer satisfaction leads to increasing a firm’s future profits and revenue, and reducing transaction costs (Lewin 2009). Secondly, in terms of business strategy management, customer satisfaction is able to prevent a company from the risks of price elasticity in buyers (Hansemark and Albinsson 2004). The customers having high satisfaction levels tend to be less price sensitive, thereby less impacted by competitors and more loyal towards the brand (Bagozzi et al. 1999; Zineldin 2000; Nesset, Nervik, and Helgesen 2011). The empirical research of Kim, Lee, and Lee (2008) also supported this argument; simultaneously, it highlighted that customer satisfaction combined with promotion events had been believed to create switching barriers - difficulties when customers switch to another service or product provider, and elevate the company’s competitive advantages in the market.

One of the determinants of customer loyalty has been proven to be their satisfaction (LaBarbera and Mazursky 1983; Anderson and Sullivan 1993; Fornell 1992; Mittal and Kamakura 2001; Nam et al. 2011; Ene and Özkaya 2014). Indeed, customer satisfaction is determined after an evaluation process between a customer’s expectations towards the brand and the values he perceives from it (Chen and Wang 2009). The more positive the evaluation with a firm’s products or services, the stronger the customer’s loyalty. It means that customers who are considerably satisfied with the brand are more likely to stay loyal to the brand's products, come back for the next purchase, and spread the word with friends and families. Similarly, in many other prestigious research, satisfaction is investigated as the predecessor of brand loyalty - the final stage in the customer’s response to a brand’s offerings (LaBarbera and Mazursky 1983; Oliver 1999; Mittal and Kamakura 2001; Torres‐Moraga et al. 2008). In addition, the mediating role of customer satisfaction in the relationship between brand equity and brand loyalty has been studied in the research by Anderson and Sullivan (1993), Awan and Rehman (2014), and Nam et al (2011). Thus, it is credible to propose the following hypothesis:

***H5: Customer Satisfaction has a positive effect on Brand Loyalty***

## 2.5. Research Model

Based on the nine above hypotheses, the research model of this dissertation can be seen in the following figure:

Figure 3. Research Model

Brand Awareness

Perceived Quality

Brand Associations

Customer

Satisfaction

Brand Loyalty

H1 (+)

H2 (+)

H5 (+)

H3 (+)

H6a

H6b

H6c

Price

Premium

H4 (+)

H6d

# CHAPTER III: METHODOLOGY

## 3.1. Introduction

This methodological chapter aims to determine the methodology and dataset used throughout the dissertation, focusing on the question research *“to what extent customer satisfaction mediates the impact of customer-based brand equity on brand loyalty?”*. It included three main parts; particularly, the first one involves research design that presents the philosophy, approach and strategy, the second one demonstrates the way secondary data was collected and reviewed, and the final part relates to the way basic frameworks are analysed for hypotheses. In addition, the research “onion” presented by Saunders, Lewis and Thornhill (2012) is used to organize the methodology.

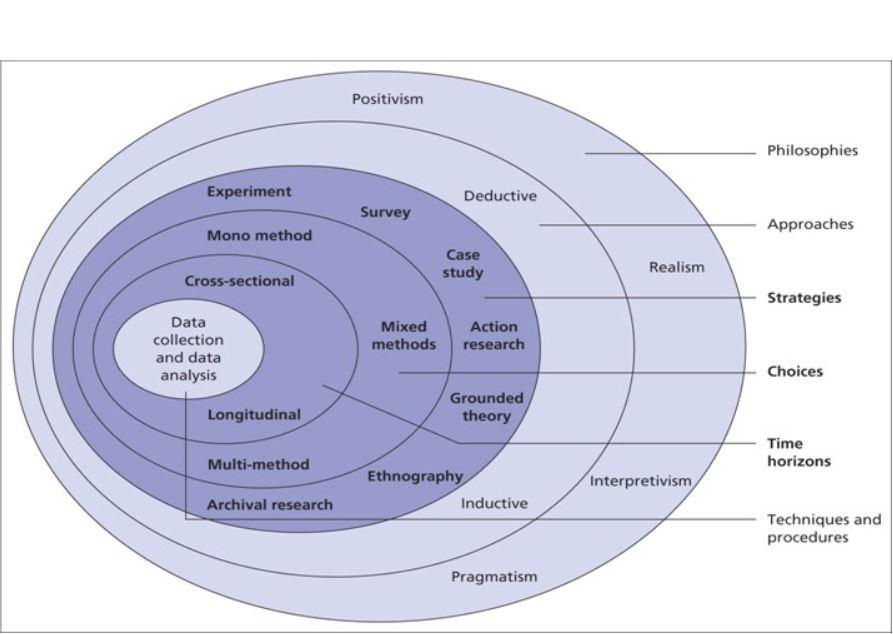


Figure . The research “onion” model by Saunders, Lewis and Thornhill

## 3.2. Methodology and Research Design

### 3.2.1. Research Philosophy

In essence, research philosophy involves perceiving and formulating a researcher’s beliefs and assumptions related to the source, nature and development of knowledge (Bajpai 2011). In simple terms, a research philosophy enables the scholar to achieve the research’s goal through choosing the most appropriate methodology that deals with the beliefs about the way how the dataset related to a phenomenon is collected, utilized and analysed (Dudovskiy 2017). Regarding the scope of academic business research, there are four fundamental types of research philosophy, including positivism, interpretivism, realism and pragmatism (Saunders et al 2012). According to Collis and Hussey (2003), positivism and interpretivism are likely to be two more popular philosophical designs of the research used in the business field. Separated kinds of research philosophy have distinct influences on the ways authors process and interpret their research objects and questions (Crossan 2003).

Interpretivism or social science approaches the veracity and viewpoint of the subject through qualitative research (Dudovskiy 2009) because it focuses on different aspects of the issue based on investigating personal experience and knowledge (Ryan 2018). Meanwhile, positivism relies on statistics and figures collected from real social factors that are easy to observe and measure (Saunders et al. 2012). Hence, scholars tend to use quantitative approaches; especially, they collect quantifiable data and use statistical methods to interpret the results (Amaratunga et al. 2002). This method enables researchers to justify the validity of the hypotheses and further improve the insights and interpretations of the findings (Collins 2019). To consider the variability of brand loyalty in relation to brand equity through the mediating effects of customer satisfaction, this research employs the positivist approach.

### 3.2.2. Research Approach

Saunders et al. (2012) divided the research approaches into two main branches, namely inductive and deductive. The inductive approach is used when a scholar needs to build a theory from the patterns after observing a substantial amount of data (W Trochim and Donnelly 2008). In particular, a researcher starts with data collection that is relevant to his research topic; since then, discover trends and recognize problems. The final stage involves developing hypotheses and explaining theories based on the results and findings (Azungah 2018). Therefore, Bryman and Bell (2011) suggested that the inductive approach tends to exist in the qualitative studies that do not require correctly calculated formulas and numbers.

On the other hand, the deductive approach requires researchers to theorize and hypothesize before analysing data to justify how supportive their hypotheses are (Gabriel 2013). Principally, this approach reverses the order of the steps described for inductive research. Commencing with the implications recognized from a compelling social theory, scholars process a set of information and data to conclude the hypotheses (Trochim and Donnelly 2008). The way they move from a more general level to a more specific one links deductive approaches to scientific investigation that are associated with quantitative measurement (Saunders et al. 2012).

In relation to this paper, the hypotheses formulated from the academic literature mentioned in chapter two are tested based on analysing the database to draw a conclusion. Consequently, the deductive approach is utilized in this dissertation.

### 3.2.3. Research Method

Developing a research method is an essential part of a research design since it reflects particular procedures for collecting and analysing data (Mcleod 2019). Quantitative and qualitative have been considered as two fundamental types of research methods (Autor: Pertti Alasuutari et al. 2008); however, the mixed method of these types is widely used in academic research (Creswell and Zhang 2009). The remarkable distinction between the two types of methods is the measurement of numeric data (Saunders et al. 2012). Qualitative method regards descriptive data and phenomena that can use language and be observed but not measured; meanwhile, qualitative method is linked to information about quantities and numbers.

Qualitative research aims to deeply investigate how people perceive and respond to issues of society, thereby having a profound knowledge of their behaviour, attitudes and experiences of attendants (Saunders et al. 2012). According to Bryman and Bell (2011), there are distinct types of qualitative research such as in-depth interviews, documents, focus groups, case study research, and diary accounts.

On the other hand, quantitative research is known as the foundation for positivist philosophy and deductive approach (Mcleod 2019). It involves objectively collecting and analyzing numeric data to test the hypotheses of causal relationships between variables, since then predict future results and generate comprehensive findings for wider populations (Kalra et al. 2013). In addition, quantitative research has been proven to be absolutely effective with the massive range of information (Marshall 1996), which means that it is appropriate for the studies utilizing data having a huge number of research respondents.

The mixed method that combines qualitative and quantitative one, albeit requiring more time and effort than the two above methods, has certain advantages, including giving different perspectives, providing essential ingredients of understanding, and comparing and contrasting results and then achieving deeper insights (Osbaldeston 2018). However, this paper focuses on identifying the correlations amongst customer satisfaction, brand equity and brand loyalty through a relatively huge dataset; therefore, the quantitative method will be chosen to most efficiently present the research implications and questions.

### 3.2.4. Research Strategy

As mentioned and analysed, in order to clarify the research question, this study puts the quantitative method as the center of research strategy, associated with positivism philosophy and deductive approach. In particular, the objectives of this research are to study how significant customer satisfaction mediates the impact of customer-based satisfaction on brand loyalty. Firstly, the secondary database in terms of the research topic is proposed and cleaned. It is essential for the database to cover thoroughly the hypotheses developed before. Next, as the middle stage of the deductive approach, data is arranged and calculated to achieve the insights and findings that reflect the relationship between any two variables. Finally, conclusions are drawn by determining whether the hypotheses are supported or not.

## 3.3. Data Collection

### 3.3.1. Survey and Database

Data collection plays an important role in the systematic process of gathering observations and gaining the aims and objectives of quantitative research because it enables researchers to achieve first-hand knowledge and insights of research questions (Bhandari 2020). Data collection is divided into two key types: primary data and secondary data (Saunders at al. 2012). Primary data is directly collected by researchers through interviews, surveys, experiments, etc; significantly, interviews and surveys are the most popular ways used to gather data (O’Leary 2014). Generally, this kind of data collection is considered as the original data resource that is collected and conducted to meet the specific demands and requirements of a particular research (Malhotra 2010). Conversely, secondary data involves using available datasets for researcher’s own investigations (Johnston 2014). They can easily access secondary data through credible sources such as journals, newspapers, magazines, reports and academic research (Bryman and Bell 2011). Compared to primary data that is relatively time-consuming and effort-involved, secondary one allows scholars to effectively conduct their studies and achieve more accurate results for the population using a huge-size data sample (Saunders et al. 2012).

Regarding the database of this dissertation, the secondary data of a European study in customer-based brand equity is used to answer the research question. In particular, the process of gathering the dataset aims to fill vital gaps in the measurement of CBBE and to improve managerial marketing practice. Moreover, according to Christodoulides (2016), the creator of the data set, this set of data enables researchers to conduct studies related to brand equity in a European context that is limited to investigate before because previous researches were based on the USA by American scholars. The dataset originated from the survey conducted in the UK, Germany, and Greece with exactly 1829 participants from 1 March to 30 April 2011. Because both qualitative and quantitative data were collected in three typical European countries belonging to different European cultures; specifically, the UK belongs to the Anglo group, Germany to the Germanic group and Greece to the Near East group, it is comprehensive for findings and results.

In terms of the survey, adult consumers in the UK (n=605), Germany (n=600), and Greece (n=624) were interviewed with face-to-face questionnaires. The number of respondents in each country was limited because it is necessary to ensure the samples were representative of each nation’s population. After being piloted in the UK and pre-testing in German and in Greek, the survey was carried out face-to-face by trained fieldworkers in urban centers. There is no recorded information related to how the participants were chosen to take part in the survey. Participants answered totally 20 questions; insides, there are 09 questions with regard to personal information or demographic profile and their chosen brand from a category of products including shampoo, coffee shop, mobile network, bank, and internet retailer; and 11 questions related to consumers’ perceptions on CBBE measured on a 7-point Likert scale. More specifically, the Likert scale from 1 to 7 reflects respectively seven ascending levels from "strongly disagree" to "strongly agree".

### 3.3.2. Variables and Data Restrictions

* + - 1. *Data restrictions*

As mentioned, the dataset consists of 1928 observations. Valid answers are sets of positive integers whose values start at one. However, in practice, the dataset includes many values that are not in the required range. So the author deletes the entire rows that contain the requested non-integer value. As a result, the number of observations was reduced to 1512. In addition, no NA or missing values were recorded.

* + - 1. *Variables definitions*

The final database consists of 1512 observations and 10 variables divided into three groups: Outcome variable, explanatory variables, mediator and control variables. The sets of items used to generate the values of the six key variables are shown in [Appendix 1](#App1).

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | Type of variable | Variable  Name | Variable Definition | Data Values | Data Type |
| 1 | Outcome Variable | Brand Loyalty  (BL) | Composite score of 6 questions about the extent to which a customer has repetitive product and service purchasing behaviour and defends himself from strong attractiveness of competitors. Each question’s scale (from 1 to 7) is developed based on respondent’s agreement or disagreement with the statement. | 1 ="strongly disagree"  7 = "strongly agree" | Continuous variable |
| 2 | Key explanatory variables | Brand Awareness  (BAw) | Composite score of 6 questions about the customers’ ability to recall and recognize the brand and to connect the brand name, logo, symbol, and so forth to certain associations in memory. Each question’s scale (from 1 to 7) is developed based on respondent’s agreement or disagreement with the statement. | 1 ="strongly disagree"  7 = "strongly agree" | Continuous variable |
| 3 | Brand Association  (BAs) | Composite score of 5 questions about the extent to how a customer links the reflections of internal and external characteristics of a brand in his memory to his life, which demonstrate the importance of the brand. Each question’s scale (from 1 to 7) is developed based on respondent’s agreement or disagreement with the statement. | 1 ="strongly disagree"  7 = "strongly agree" | Continuous variable |
| 4 | Perceived  Quality  (PQ) | Composite score of 6 questions about a consumer’s judgements on a product or service’s overall esteem, excellence or superiority in respect of its intended purpose, in comparison with other given alternatives. Each question’s scale (from 1 to 7) is developed based on respondent’s agreement or disagreement with the statement. | 1 ="strongly disagree"  7 = "strongly agree" | Continuous variable |
| 5 | Price Premium  (Pri) | Composite score of 3 questions about a customer’s willingness to pay for a brand or pay an additional amount of money for the extension product, compared to other relevant brands. Each question’s scale (from 1 to 7) is developed based on the respondent's agreement or disagreement with the statement. | 1 ="strongly disagree"  7 = "strongly agree" | Continuous variable |
| 6 | Mediator | Customer  Satisfaction  (CS) | Composite score of 4 questions about the degree to which a consumer is fulfilled or an “overall customer attitude” towards a brand's product or service. Each question’s scale (from 1 to 7) is developed based on the respondent's agreement or disagreement with the statement. | 1 ="strongly disagree"  7 = "strongly agree" | Continuous variable |
| 7 | Control Variables | Gender  (GENDER) | Gender of respondents | 1 = “Male”  2 = “Female” | Dummy variable |
| 8 | Age  (AGE) | Age group in years of respondents | 1 = “18-24”  2 = “25-44”  3 = “45-64”  4 = “65 and older” | Nominal variable |
| 9 | Qualification  (EDUCATE) | Education highest level of survey participants | 1 = “Higher degree and postgraduate qualifications”  2 = “Degree, or degree level equivalent”  3 = “School leaving certificate (A levels, Apolytirion, Baccalauréat, Arbitur)”  4 = “Other qualifications (eg GCSE)”  5 = “No qualifications” | Dummy variable |
| 10 | Annual Income  (INCOME) | The gross personal annual income in £ of survey participants | 1 = “Lower than £9,000”  2 = “£9,001 - 17,000”  3 = “£17,001 - 25,000”  4 = “£25,001 - 34,000”  5 = “£34,001 - 42,000”  6 = “£42,001 - 50,000”  7 = “£50,001 - 59,000”  8 = “More than £59,001” | Nominal variable |

Table . Variable Definitions

## 3.4. Analysis Methodology

### 3.4.1. Data Analysis Tool

In terms of the tools supporting analysing and visualizing in this paper, RStudio are used. Specifically, R programming is used for statistical analysis because it is known as a free, open-source IDE (integrated development environment) software program based on the S language (Yeager 2020). Moreover, it enables the user to easily develop R code and clearly view graphs, data tables, and output; significantly, RStudio has been designed to minimize the amount of effort and overhead to make the analytics run well (Kephart and Bajuk 2020). Data visualization plays an essential role in presenting the graphical representation of massive amounts of information in the world of Big Data and making data-driven decisions (Kaur 2017). Using RStudio for beautiful visualizations, interactive graphs and charts in the forms of dashboards and worksheets to gain insights of the research.

### 3.4.2. Data Analysis Process

*3.4.2.1. Standard Mediation Model*

To begin, it is necessary to understand the standard mediation model. In statistics, a mediation model is used to explain the relationship between an outcome variable and an explanatory variable through the inclusion of a third variable called mediator. In this dissertation, the mechanism underlying the relationship between brand loyalty and dimensions of brand equity via customer satisfaction.

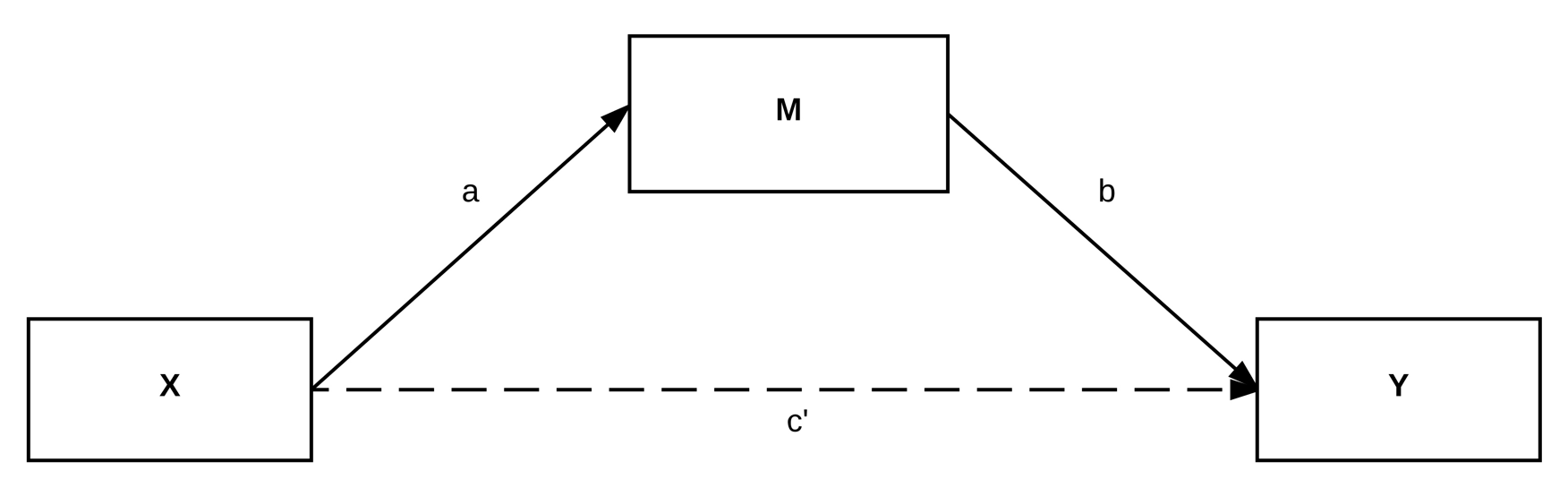


Figure . Mediation Model (C.H. Beck 2017)

The standard mediation provides the information as follows: Individual paths include a, b ( indirect effect) and c’ (direct effect); The total of indirect effect is a path estimates\*b path estimates; The total of direct effect is c’ estimate; The total effect is a\*b+c’.

In addition, the results of a mediating effect can be divided into three categories. Firstly, if the effect of X on Y completely disappears, M fully mediates between X and Y. If the effect of X on Y still exists in parallel with the effect of X on M and M on Y, M partially mediates between X and Y (partial mediation). If there is no relationship between X and M or/and between M and Y, M has no mediating effect (no mediation) (Kim 2016).

*3.4.2.2. Applied Mediation Models*

Two key models are used to analyse and find results, including Multiple Linear Moderation Model and Structural Equation Modelling (SEM), as follows:

1. Multiple Linear Mediation Model

Multiple Linear Mediation Model is a method that uses Multiple Linear Regression to test mediation effects. In particular, multiple linear regression is known as multiple regression that is applied to show the way independent variables predict the outcome one (Kenton 2020). When used in multiple mediation models, linear regression models are run and their results support moderation analysis. There are two step to test mediation by using linear mediation (Barron and Kenny 1986):

* Step 1: Regress the mediator on the independent variable to confirm that the independent variable is a significant predictor of the mediator. The a path estimates are revealed
* Step 2: Regress the dependent variable on both the mediator and independent variable to confirm whether they have effects on the outcome variable or not. The b and c’ path estimates are revealed.

1. Structural Equation Modelling (SEM)

Structural Equation Modelling is defined as a comprehensively multivariate statistical analysis approach to test hypotheses about structural relationships among measured variables and latent constructs (Boomsma 2000). According to Hoyle (1995), SEM associates factor analysis and multiple regression analysis. This technique is preferred by the researchers because it allows to present, estimate and test a theoretical network of linear relations between variables (Rigdon 1998) and easily test multiple and interrelated patterns of directional and nondirectional relationship among a set of observed and unobserved variables (MacCallum and Austin 2000). The process of SEM for mediation tests includes the test of model fit and support of hypotheses.

* Test of model fit: The research uses Goodness of Fit Indices (GOF Indices) to measure the goodness of fit of a statistical model. It allows an investigator to understand the difference between observed values and the values expected under the model in question. In other words, it is used to determine the consistency of the theoretical model as a whole with the empirical data (Stephanie 2014).
* Support of hypotheses: In this part, nine hypotheses are examined to determine whether each of them supports the research theory or not. These hypotheses are measured and mediation model is also examined like Multiple Linear Regression Analysis.

Finally, the results of both models are shown and compared. Their difference is discussed for clarification.

# CHAPTER IV: DATA ANALYSIS AND DISCUSSIONS

## 4.1. Descriptive statistics, reliability and correlation analysis

### 4.1.1. Demographic Profiles and Descriptive Statistics

* + - 1. *Demographic Analysis*

Descriptive statistics is known as a process of necessary preparation for data analytics (McCarthy et al. 2019), it transfers the data into different types of data forms, especially frequency (Hair et al. 2010). In this dissertation, the descriptive is used to investigate the demographic background of the survey participants, including gender, age group, familiar product or service, highest held qualification and annual income, as depicted in Table 2:

|  |  |  |  |
| --- | --- | --- | --- |
| Demographic Variables | | Frequency | Percentage (%) |
| Age | 18-24 | 226 | 14.9 |
| 25-44 | 539 | 35.6 |
| 45-64 | 483 | 31.9 |
| 65 and older | 264 | 17.5 |
| Gender | Female | 762 | 50.4 |
| Male | 750 | 49.6 |
| Qualification | Higher degree  and postgraduate qualifications | 117 | 7.7 |
| Degree, or degree level equivalent | 503 | 33.3 |
| School leaving certificate (A levels, Apolytirion, Baccalauréat, Arbitur) | 625 | 41.3 |
| Other qualifications (eg GCSE) | 248 | 16.4 |
| No qualifications | 19 | 1.3 |
| Annual Income | Lower than £9,000 | 437 | 28.9 |
| £9,001-17,000 | 374 | 24.7 |
| £17,001-25,000 | 273 | 18.1 |
| £25,001– 34,000 | 154 | 10.2 |
| £34,001-42,000 | 138 | 9.1 |
| £42,001-50,000 | 86 | 5.7 |
| £50,001-59,000 | 36 | 2.4 |
| More than £59,001 | 14 | 0.9 |

Table . Demographic Profiles

Age and gender are two basic types of biographical background. The gender of survey participants is relatively balanced, specifically, male is made up 49.6% (N= 750), while 50.4% are female (N=762). In terms of age of survey participants, it is recorded that people aged 25-44 participated most with 539 people (accounting for 35.6%), 31.9% of respondents (N=483) are in 45-66 category, and the group aged 65 and older ranked third place with 264 participants (making up 17.5%). The gender proportion continues to be maintained almost equally in each age group (Figure 6).

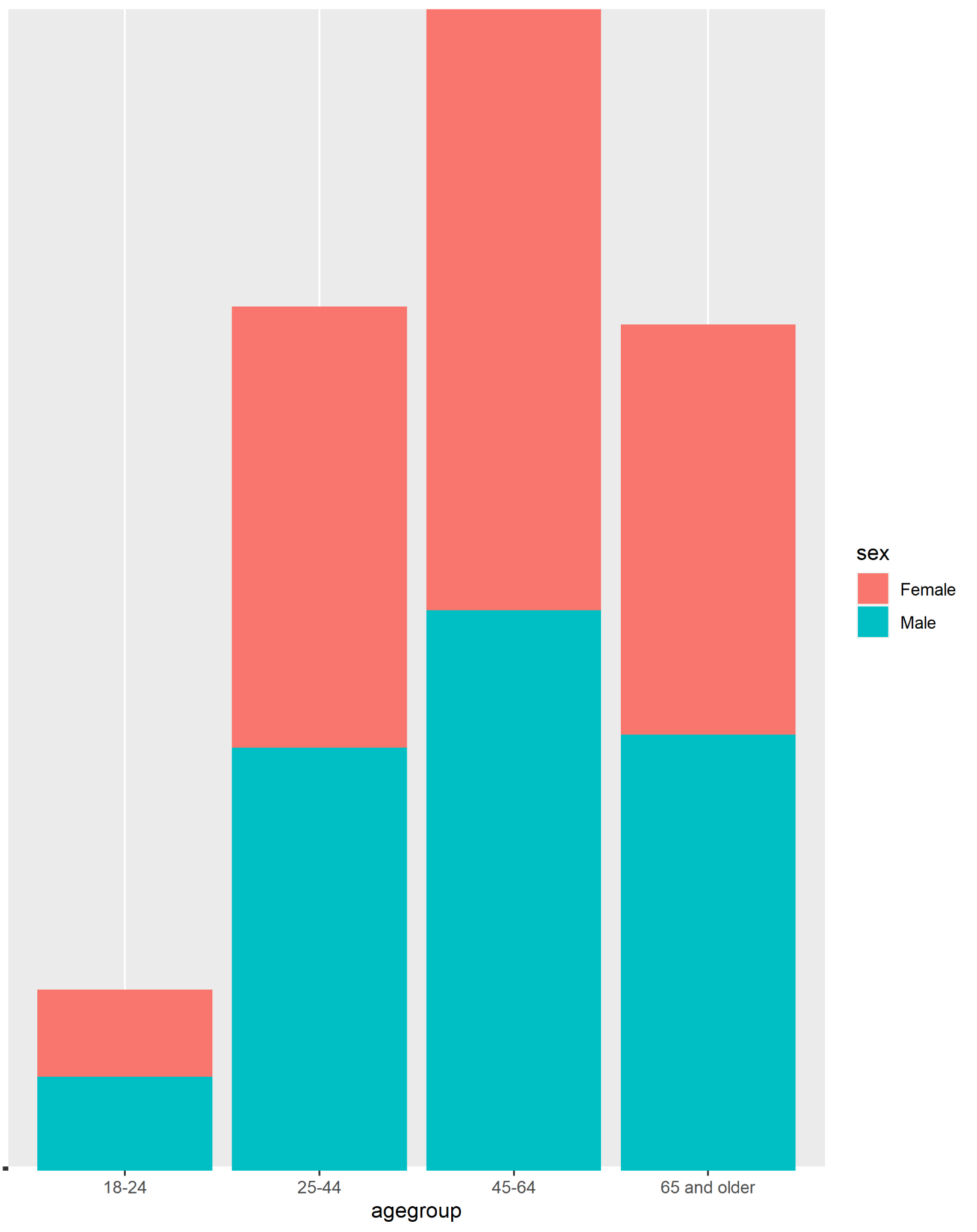


Figure . Gender ratio by age group

Regarding educational qualifications, the highest percentage belongs to the group holding a schooling leaving certificate with 625 people (accounting for 41.3%), 122 people higher than a degree or degree level equivalent. Meanwhile, there are only 7.7% of participants possessing higher degree and postgraduate qualifications. This figure for survey respondents with no qualification is 1.3%. Additionally, the annual income distribution consisted of 28.9% of respondents earning less than £9,000 and the second largest section of those respondents (24.7%) earning from over £9,000 to £17,000 per year. The higher the income level, the less the corresponding percentage of people participating in the survey (Figure 7). It is noted that the number of respondents with income above £59,001 is the fewest with 14 out of 1512 people (making up 1.4%).

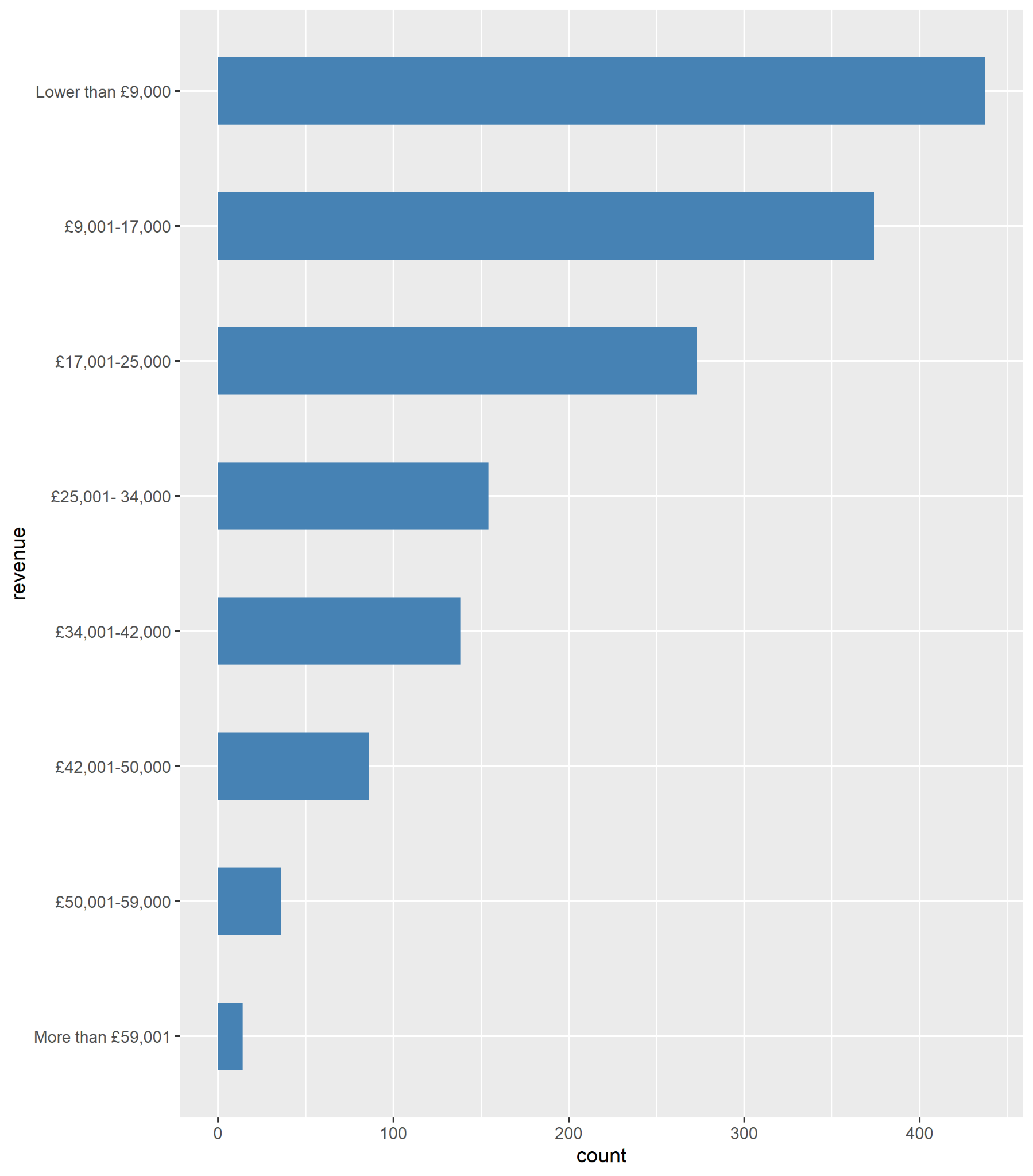


Figure . Annual income of respondent

*4.1.1.2. Descriptive Analysis*

In this part, other descriptive results of the research were given to overview the outcome, explanatory variables and the mediator. Figures are seen in Table 3:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variable | | N | Mean | Std. Deviation | Min | Max | Reliability |
| Outcome Variable | Brand Loyalty | 1512 | 3.03 | 1.81 | 1.00 | 7.00 | 0.95 |
| Explanatory Variables | Brand Awareness | 1512 | 5.17 | 1.26 | 1.17 | 7.00 | 0.84 |
| Brand Association | 1512 | 2.79 | 1.68 | 1.00 | 7.00 | 0.93 |
| Perceived Quality | 1512 | 4.33 | 1.79 | 1.00 | 7.00 | 0.97 |
| Price Premium | 1512 | 2.87 | 1.76 | 1.00 | 7.00 | 0.89 |
| Mediator | Customer Satisfaction | 1512 | 4.13 | 2.02 | 1.00 | 7.00 | 0.96 |

Table . Descriptive Statistics and Reliability Analysis

As it is seen in the table, on the range from 1 to 7, Brand Loyalty levels for all participants are in the middle (Mean = 3.03), which indicates that survey respondents tend to be neutral with the statements related to repurchasing behaviour and defending themself from a brand’s competitors.

With regard to four subscales of CBBE, there is a significant difference between them. In particular, Brand Awareness dimension recorded the highest mean value (5.17) in the range between 1.17 and 7. Ranking the second place is Perceived Quality with Mean(PQ) = 4.33. These two figures represent the respondents’ agreeing attitude on the statements that determine brand recall, recognition and perception towards a brand’s product. The remaining two aspects, including Brand Association and Price Premium, averaged at the low end (around 2.8) on the 7-point Likert Scale. Thus, respondents' attitudes towards the statements related to customers’ link towards a brand and their willingness to pay for its product are below neutral.

Regarding Customer Satisfaction, the average value equal to 4.13 indicates that the participants tend to have a positive attitude towards the fulfilment of their expectations related to a brand's product or service. Furthermore, the standard deviation values of the above 6 variables remained from 1.26 to 2.02, showing that there is not a considerable difference in the variation of data collected.

Brand Loyalty (BL) and Customer Satisfaction (CS) are respectively outcome variable and mediator in the research model. They play an important role in the elements affected by explanatory variables and control variables. Descriptive statistics of BL and CS according to control variables are given in Table 4 and visualized from Figure 8 to Figure 11. In general, as shown in the table, all mean values of CS are higher than BL in all categorical variables.

|  |  |  |  |
| --- | --- | --- | --- |
| Demographic Variables | | Mean | |
| Customer Satisfaction | Brand Loyalty |
| Age | 18-24 | 4.46 | 3.24 |
| 25-44 | 4.01 | 2.92 |
| 45-64 | 4.04 | 2.87 |
| 65 and older | 4.25 | 3.37 |
| Gender | Female | 4.15 | 3.02 |
| Male | 4.10 | 3.04 |
| Qualification | Higher degree and postgraduate qualifications | 4.16 | 2.89 |
| Degree, or degree level equivalent | 4.03 | 2.85 |
| School leaving certificate | 4.24 | 3.09 |
| Other qualifications | 4.02 | 3.27 |
| No qualifications | 4.22 | 3.48 |
| Annual Income | Lower than £9,000 | 4.25 | 3.20 |
| £9,001-17,000 | 4.09 | 3.01 |
| £17,001-25,000 | 4.16 | 3.00 |
| £25,001– 34,000 | 3.75 | 2.90 |
| £34,001-42,000 | 3.89 | 2.72 |
| £42,001-50,000 | 4.22 | 2.90 |
| £50,001-59,000 | 4.67 | 2.94 |
| More than £59,001 | 5.38 | 4.23 |

Table . Descriptive statistics of Customer Satisfaction and Brand Loyalty according to control variables

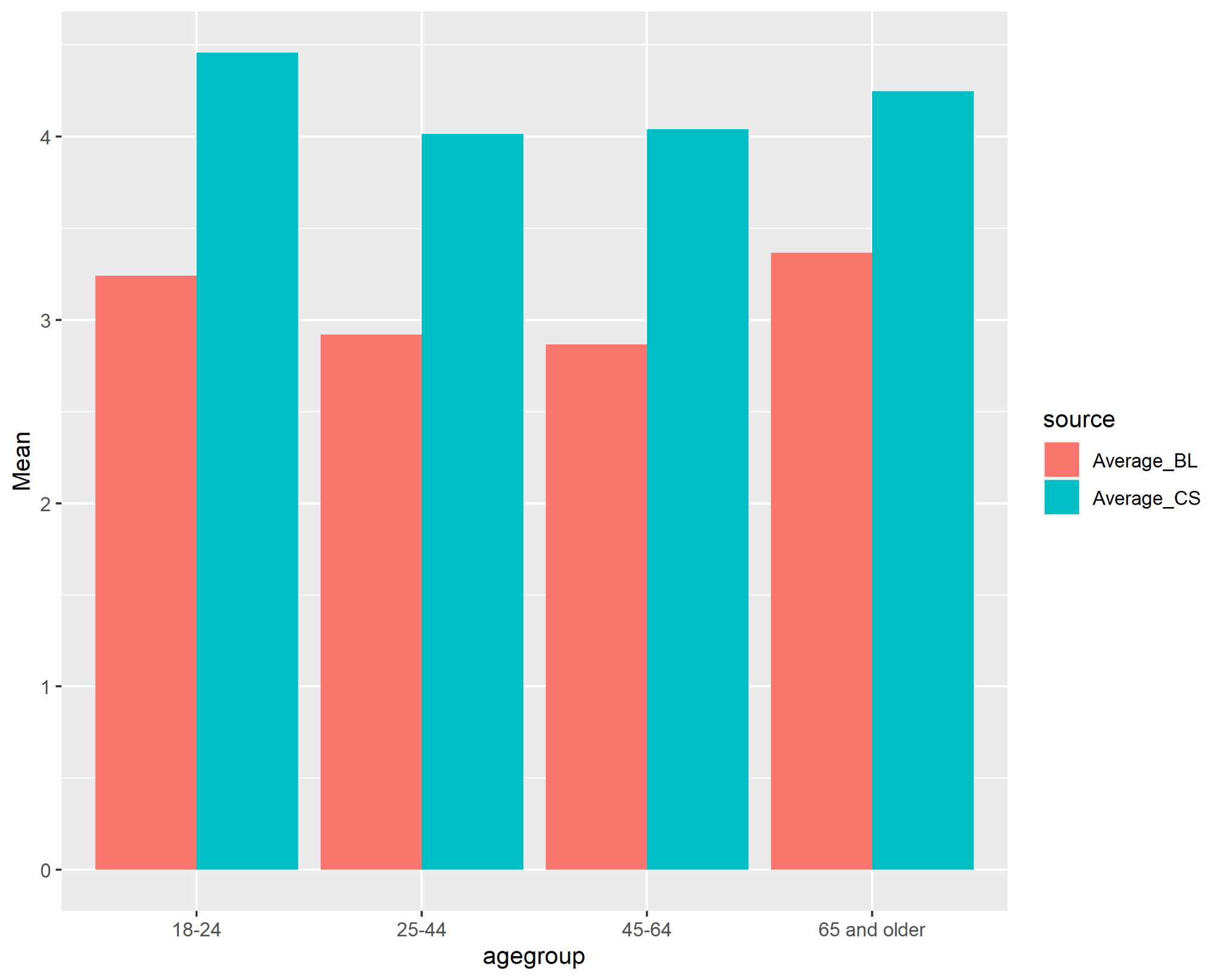


Figure . Mean of BL and CS according to age

It is clear to find in Figure 8 that the highest mean value of CS belongs to the youngest age group. This position of BL is in the oldest age group. Two groups aged from 25 to 64 possess smaller average values.

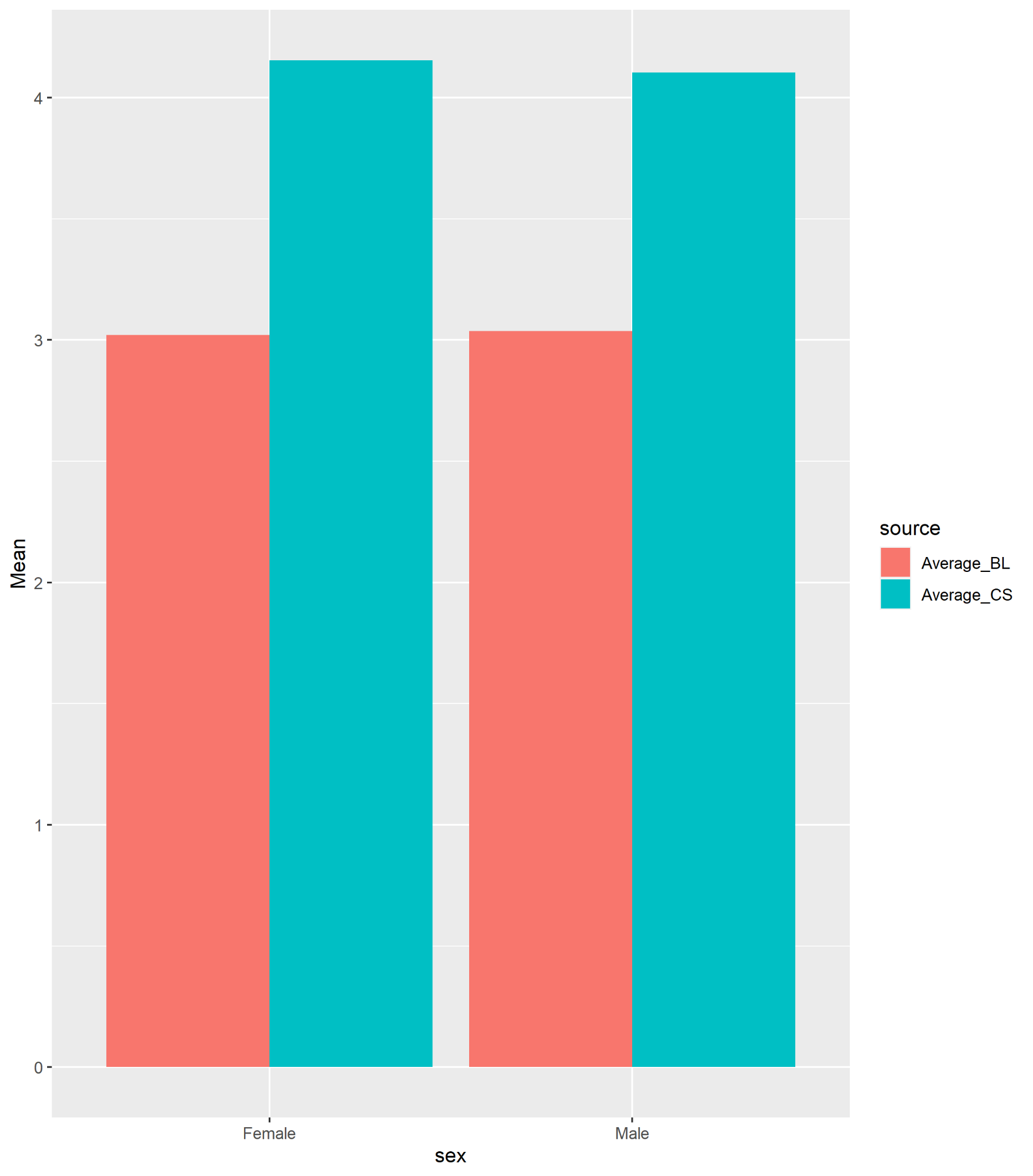


Figure . Mean of BL and CS according to gender

Figure 9 shows that there is no significant difference between female and male in the assessment of both CS and BL scores. However, females tend to rate CS higher than male. The opposite trend is seen in the mean BL level.

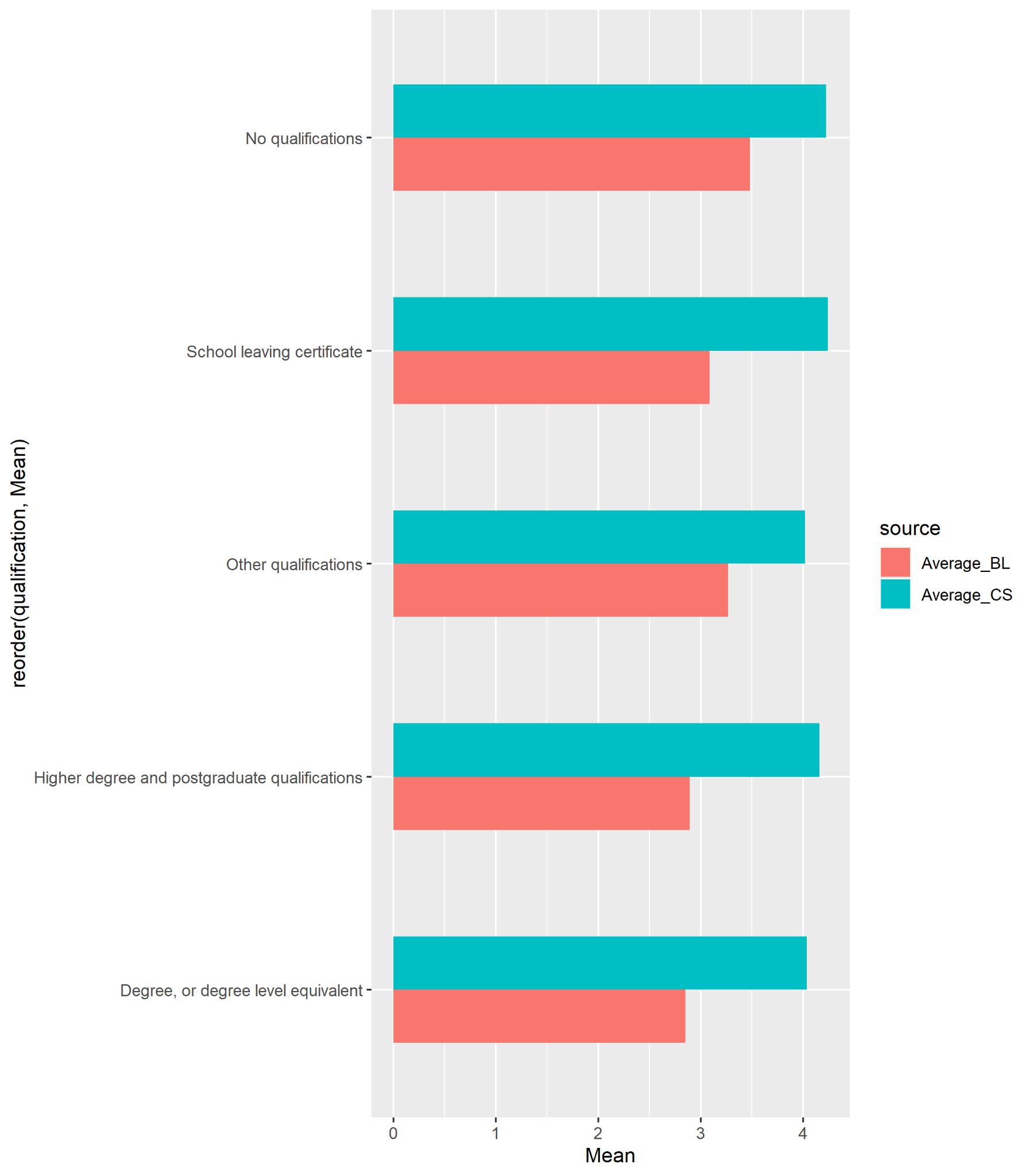


Figure . Mean of BL and CS according to qualification

As seen in Figure 10; the persons without qualifications have the highest mean CS and BL level. In contrast, the persons possessing a degree or degree level equivalent have the lowest BL and other qualifications for the lowest CS. However, there are no specific trends to reflect the statistical association between education qualification and mean levels for CS and BL.

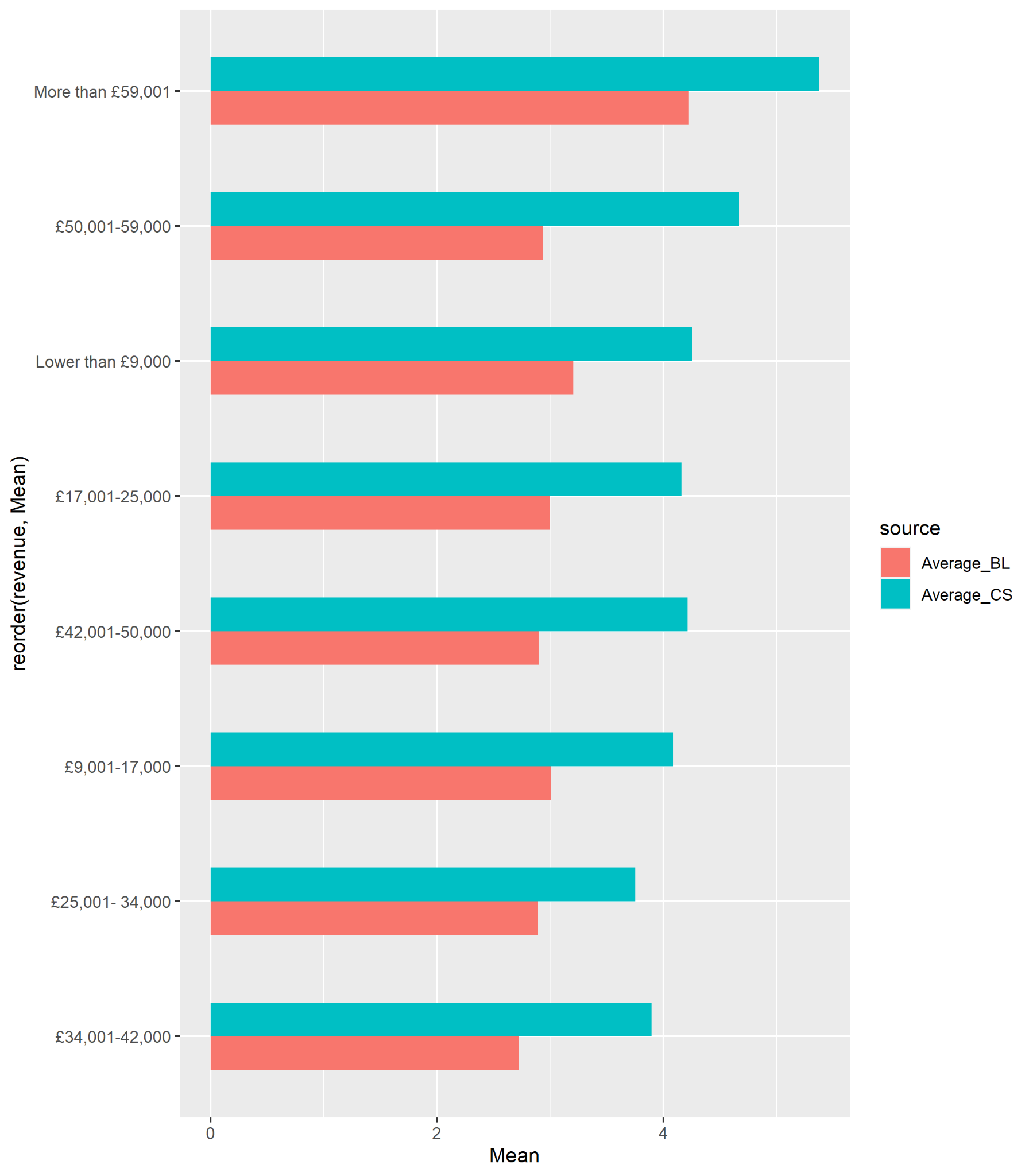


Figure . Mean of BL and CS according to annual income

Figure 11 illustrates that those who earn the highest income tend to be the most optimistic in the CS and BL assessments (5.28 and 4.23, respectively). The lowest mean values are in the group of people with incomes from 25,001 to 34,000 per year. There are no obvious trends in other income levels.

### Reliability Analysis - Cronbach’s Alpha Test

Cronbach (1951) developed alpha to measure the internal consistency of a test or scale. To ensure the validity for a research, internal consistency should be determined by measuring how closely related a set of items are as a group. A value of Cronbach’s Alpha test ranges from 0 to 1, the high value expresses the items in a test are highly correlated to each other, so all the items can receive the same concept (Tavakol and Dennick 2011). Furthermore, Cronbach’s Alpha test also allows measuring the amount of measurement error in a test (Cronbach 1951). The minimum value of Cronbach’s Alpha test has been recommended higher than 0.70 to imply the reliability of variables (Nunnally 1978; Hair et al. 2010). The results of reliability are depicted in Table 4. In particular, the Cronbach’s Alpha values of Brand Loyalty, Customer Satisfaction and four subscales of Brand Equity are more than 0.7, which ranges from 0.84 to 0.96. The results show all key variables that is constructed from the data set are reliable enough to research.

### Pearson Correlation Analysis

The Pearson Correlation Analysis is known as the test statistics that measures the linear correlation between two observed variables (Schober et al. 2018). Two values including Pearson Correlation Coefficient (r-value) and Significant (P-value) are used to determine how strongly two variables correlate (r-value) and the probability of the results when the assumption of the null hypothesis is true (P-value). The r-value returns a value of between -1 and +1, in which -1 implies a strong negative correlation, +1 means that there is a strong positive correlation and 0 means no linear correlation. The strength of the relationship varies in degree based on the value of the correlation coefficient (Ganti 2019).

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Brand Loyalty | Brand Awareness | Brand Association | Perceived Quality | Price Premium | Customer Satisfaction |
| Brand Loyalty | 1  \*\* |  |  |  |  |  |
| Brand Awareness | 0.48  \*\* | 1 |  |  |  |  |
| Brand Association | 0.83  \*\* | 0.40  \*\* | 1 |  |  |  |
| Perceived Quality | 0.77  \*\* | 0.57  \*\* | 0.67  \*\* | 1 |  |  |
| Price Premium | 0.82  \*\* | 0.44  \*\* | 0.73  \*\* | 0.70  \*\* | 1 |  |
| Customer Satisfaction | 0.80  \*\* | 0.54  \*\* | 0.70  \*\* | 0.94  \*\* | 0.73  \*\* | 1 |

Table . Pearson Correlation Results

(\*\*\* Statistically significant at the 1% level; \*\* at the 5% level; \* at the 10% level)

Table 5 suggests that P-values for the correlation between Brand Loyalty and 4 four dimensions of Brand Equity and between Brand Loyalty and Customer Satisfaction are all less than the significance level of 0.05 (Details in [Appendix 2](#App2)), which indicates that the correlation coefficients are statistically significant.

It is clearly seen that all Pearson's correlation coefficients between pairs of the observed variables are highly positive (Figure 12). The strength of a linear association between Customer Satisfaction and Perceived Value are highest with r-value = 0.94. In contrast, the lowest correlation value is between Brand Awareness and Brand Association (r-value = 0.40). Thus, as an observed variable increases, the value of the others also increases.

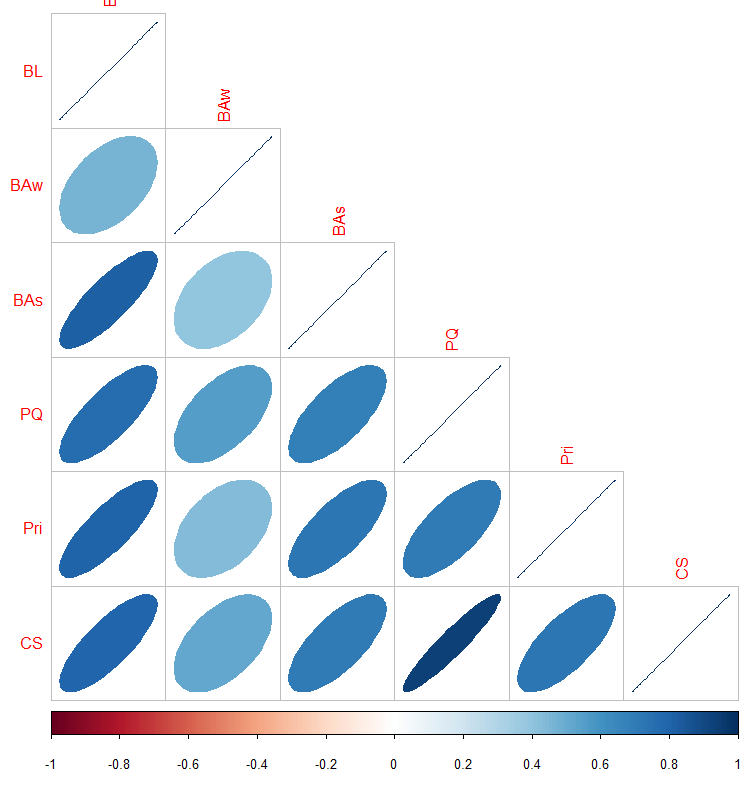
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Figure . Graphical display of the correlation matrix

## Linear Mediation Model

### Regression of Mediator (CS) on Independent Variables and Control Variables

The equation of the model 1 to estimate below:

CS = β0 + β1\*BAw + β2\*BAs + β3\*PQ + β4\*Pri + β5\*Age + β6\*factor(Qualification) + β7\*factor(Gender) + β8\*Income + u

|  |  |  |  |
| --- | --- | --- | --- |
| Term | Estimate | Std. Error | P-value |
| (Intercept) | -0.455 | 0.096 | 2.52e-06 \*\*\* |
| BAw | 0.001 | 0.017 | 0.969 |
| BAs | 0.105 | 0.016 | 9.90e-11 \*\*\* |
| PQ | 0.916 | 0.016 | < 2e-16 \*\*\* |
| Pri | 0.108 | 0.016 | 1.25e-11 \*\*\* |
| Age | 0.000 | 0.020 | 0.986 |
| Qualification\_Higher degree and postgraduate qualifications | 0.031 | 0.070 | 0.656 |
| Qualification\_No qualifications | -0.027 | 0.161 | 0.868 |
| Qualification\_Other qualifications (eg GCSE) | -0.036 | 0.055 | 0.514 |
| Qualification\_School leaving certificate | -0.007 | 0.041 | 0.868 |
| Gender\_Male | -0.056 | 0.035 | 0.115 |
| Income | 0.017 | 0.011 | 0.135 |
| Model Summary | | | |
| Residual standard error | 0.6733 | | |
| Degrees of freedom | 1500 | | |
| Multiple R-squared | 0.8899 | | |
| Adjusted R-squared | 0.8891 | | |
| F-statistic | 1103 | | |
| P-value | < 2.2e-16 | | |

Table . Regression result of Mediator

It can be seen that the R-squared value for the model is 0.8899, F-statistic is 1103 and the corresponding p-value is below 2.2e-16, which indicates that the overall regression model is significant.

The regression model results illustrate that the explanatory variables, including BAs, PQ and Pri are statistically significant at the 0.05 significance level while BAw is not (p-value = 0.969). Because of insignificant p-value, there is very little evidence against the null hypothesis, or the data tend to fail in rejecting the null hypothesis of Hypothesis 1, meaning that the study could not end up with the assumption that brand awareness has a positive effect on consumer satisfaction. Three remaining dimensions of CBBE, particularly, brand association (coef. = 0.105), perceived quality (coef. = 0.916) and price premium (coef. = 0.108) have significant coefficients, thereby having positive effects on customer satisfaction, which supports Hypothesis 2, 3, 4. Among them, the highest coefficient belongs to perceived quality. It means a consumer’s positive judgements on a product or service’s overall excellence or superiority make them more satisfied. On the other hand, the impact of brand awareness and price on customer satisfaction are remarkably lower than that of perceived value dimension.

In terms of control factors, p-value of age, gender, qualification, and annual income are higher than 0.05, which presents that these control variables have no influence on the degree of a consumer’s fulfilment or their attitude towards a brand's product or service.

### Regression of Outcome Variable (BL) on Independent Variables, Mediator and Control Variables

The equation of the model to estimate below:

BL = α + β1\*BAw + β2\*BAs + β3\*PQ + β4\*Pri + β5\*Age + β6\*factor(Qualification) + β7\*factor(Gender) + β8\*Income + β9\* CS + u

|  |  |  |  |
| --- | --- | --- | --- |
| Term | Estimate | Std. Error | P-value |
| (Intercept) | -0.486 | 0.109 | 9.02e-06 \*\*\* |
| BAw | 0.046 | 0.019 | 0.016 |
| BAs | 0.420 | 0.018 | < 2e-16 \*\*\* |
| PQ | 0.071 | 0.032 | 0.026 |
| Pri | 0.314 | 0.018 | < 2e-16 \*\*\* |
| Age | 0.040 | 0.022 | 0.071 |
| Qualification\_Higher degree and postgraduate qualifications | 0.014 | 0.078 | 0.861 |
| Qualification\_No qualifications | -0.060 | 0.181 | 0.741 |
| Qualification\_Other qualifications (eg GCSE) | 0.177 | 0.062 | 0.004 |
| Qualification\_School leaving certificate | 0.039 | 0.046 | 0.399 |
| Gender\_Male | 0.028 | 0.040 | 0.486 |
| Annual Income | -0.028 | 0.013 | 0.025 |
| CS | 0.196 | 0.029 | 1.80e-11 \*\*\* |
| Model Summary | | | |
| Residual standard error | 0.7561 | | |
| Degrees of freedom | 1499 | | |
| Multiple R-squared | 0.826 | | |
| Adjusted R-squared | 0.8246 | | |
| F-statistic | 593 | | |
| P-value | < 2.2e-16 | | |

Table . Regression result of Outcome Variable

It can be seen that the R-squared value for the model is 0.826, F-statistic is 593 and the corresponding p-value is below 2.2e-16, which indicates that this overall regression model is also significant for research.

The regression model results illustrate that all four explanatory variables, including BAw, BAs, PQ and Pri are statistically significant at the 0.05 significance level. Thus, it can be accepted that brand awareness, brand association, perceived quality and price premium have positive impacts on brand loyalty. In other words, Hypothesis H6a, H6b, H6c and H6d are all supported. With regard to the magnitude of their effect, it is recorded that brand association and price premium are two highest coefficients. It implies that if these dimensions of CBBE increase by 1 unit in the condition of unchanged other variables, the value of brand loyalty will also increase respectively by 0.42 and 0.314 units. In addition, customer satisfaction has a significant coefficient in the model (coef. = 0.196, P = 1.80e-11), this variable affects brand loyalty level positively. Therefore, Hypothesis 5 is supported.

In the model, p-values of almost all education levels, except for other qualifications (GCSE for example), are insignificant. Thus, out of the dummy variables for education, there is only the “other qualifications” category that has effects on brand loyalty. Similarly, annual income has negative and significant effects on brand loyalty level (coef. = -0.028, P = 0.025), it illustrates when the individuals earn more money, their loyalty toward a brand decreases. In addition, it is recorded that no effects of gender and age group on brand loyalty because their p-values are statistically insignificant.

From the above linear regression analysis, the conclusions about the mediating effect of CS on the relationship between 4 dimensions of CBBE on BL are as follows:

* Because there is no relationship between brand awareness and customer satisfaction (model 1), however Brand Awareness affects Brand Loyalty (model 2). Therefore, there are no mediating effects of customer satisfaction on the relationship between Brand Awareness and Brand Loyalty.
* There are not only significant relationships between Customer Satisfaction and 3 remaining sub-scales of CBBE (Brand Association, Perceived Quality and Price Premium), but also direct relationships between Brand Loyalty and these treatment variables. Thus, Customer Satisfaction has partial mediating effects on the relationship between 3 dimensions of CBBE, including Brand Association, Perceived Quality and Price Premium, and Brand Loyalty.

## Structural Equation Modelling

### Test of Model Fit

* + - 1. *Criteria and theory of the value of goodness-of-fit for SEM*

In this dissertation, three main criteria of the Goodness of Fit Indices (GOF Indices) are checked to assess whether the theoretical model is reasonably consistent with the empirical data. Their name and threshold value for good fit are shown in the below table:

|  |  |  |
| --- | --- | --- |
| GOF Indices | Meaning | Recommended Value |
| RMSEA | Root Mean Square Error of Approximation | 0.01 ≤ RMSEA ≤ 0.08 |
| CFI | Comparative Fit Index | 0.90 ≤ CFI ≤ 1.00 |
| TLI | Tucker – Lewis Index | 0.90 ≤ TLI ≤ 1.00 |

Table . Criteria of model goodness-of-fit tests

Firstly, RMSEA is a measure whose goal is for the population to have an approximate or close fit with the model, rather than an exact fit (Kaplan 2009). According to Xia and Yang (2018), RMSEA is widely used in Structural Equation Modelling (SEM) to provide a mechanism for adjusting for sample size where chi-square statistics are used. Three levels of RMSEA (0.01, 0.05 and 0.08) imply respectively excellent, good, and mediocre model fit (MacCallum et al. 1996).

Secondly, CFI examines the extent to which the data is different from the hypothesized model, while adjusting for issues of sample size inherent in the Chi-squared test of model fit (Gatignon 2009). Ranging from 0 to 1, CFI indices above 0.09 have been known as being associated with a good fit (Gerbing & Anderson 1992).

Finally, TLI is an incremental fit index and reflects a relative reduction in misfit per degree of freedom (Tucker & Lewis 1973). Similar to CFI, this index also ranges between 0 and 1 with values greater than 0.90 illustrating good fit (Gerbing & Anderson 1992).

* + - 1. *Results of model goodness-of-fit tests*

The results for the GOF Indices of the original model are depicted in the corresponding column in Table 9. With a RMSEA of 0.094 that is higher than cut-off value (0.08), the proposed model provides an inadequate-fit representation of the data. In addition, CFI and TLI are all below 0.09, which represents that it is not a good enough fitness model in SEM.

|  |  |  |
| --- | --- | --- |
| Index | Original Model | Modified Model |
| RMSEA | 0.094 | 0.078 |
| CFI | 0.877 | 0.915 |
| TLI | 0.864 | 0.906 |
| Overall result | Poor Fit | Acceptable fit |

Table . Result of original and modified full moderation model

When the model fails to fit well or the hypothesized model does not represent validly for the population model, the Modification Index (MI) is used to re-specify the structural equation model to attain a better fit (Whittaker 2012). During the modification process, MI is conducted to estimate the amount by which the Chi-square would be reduced if certain parameters were to be added to or removed from the model.

In the case of the original model, the modification output recommends the parameters that should be added into the model to improve its goodness of fit ([Appendix 3](#App3)). The parameters include covariances (~~) or the loading for each indicator on its factor (=~). In order to improve the model without affecting paths and the theoretical knowledge, there are only 4 added parameters of covariances to be an aid to the model; in particular, “SACRIF1” ~~ “SACRIF2”, “ATTACH1” ~~ “ATTACH2”, “SACRIF2” ~~ SACRIF3, “QUAL1 ~~ “QUAL2”. These variables are involved in the covariances that are not well captured by the original model.

The GOF indices of the modified model shown in the above table indicate that the new model fulfils the requirements of an acceptable fit model.

### Structural Model Testing

To examine the mediating impact of consumer satisfaction, two main regression models are tested in the SEM. The path diagram of the SEM model is represented in the below figure:

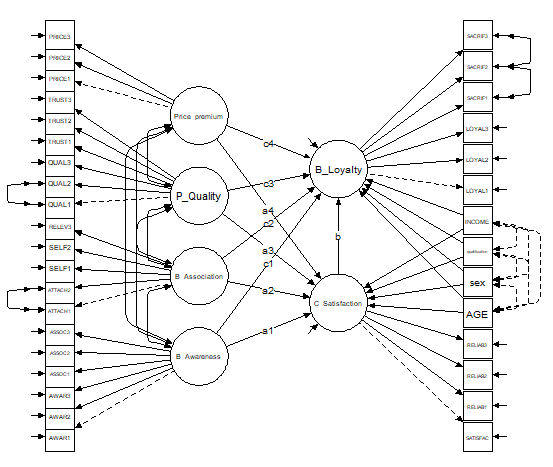


Figure . The path diagram of the SEM

The results are depicted in Table 10:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Hypothesis | Relationship | Path | Mediation Effect | |
| Standardized path coefficients | Significance value (P-value) |
| H1 | Brand Awareness -> CS | a1 | -0.0455 | 0.116 |
| H2 | Brand Association -> CS | a2 | 0.0698 | 0.001 |
| H3 | Perceived Quality -> CS | a3 | 0.9414 | 0.000 |
| H4 | Price Premium -> CS | a4 | 0.0401 | 0.041 |
|  | Age -> CS |  | -0.0142 | 0.4097 |
|  | Annual income -> CS |  | 0.0130 | 0.1866 |
| H5 | Customer Satisfaction -> BL | b | 0.4192 | 7.30E-08 |
| H6a | Brand Awareness -> BL | c1 | 0.1332 | 0.001 |
| H6b | Brand Association -> BL | c2 | 0.5062 | 0.000 |
| H6c | Perceived Quality -> BL | c3 | -0.0184 | 0.818 |
| H6d | Price Premium -> BL | c4 | 0.2485 | 0.000 |
|  | Age -> BL |  | 0.0744 | 0.0016 |
|  | Annual income -> BL |  | -0.0279 | 0.0397 |
| Indirect Effect | Indirect\_BAw | a1\*b | -0.0191 | 0.134 |
| Indirect\_BAs | a2\*b | 0.0293 | 0.002 |
| Indirect\_PQ | a3\*b | 0.3947 | 1.02E-07 |
| Indirect\_Pri | a4\*b | 0.0168 | 0.050 |
| Total Effect | Total\_BAw | a1\*b+c1 | 0.1141 | 0.005 |
| Total\_BAs | a2\*b+c2 | 0.5354 | 0.000 |
| Total\_PQ | a3\*b+c3 | 0.3763 | 0.000 |
| Total\_Pri | a4\*b+c4 | 0.2653 | 0.000 |

Table . Results of Structural Equations Analyses for Full Mediation and Partial Mediation Models

As seen in table 10, with p-value > 0.05, the relationship between brand awareness and customer satisfaction fails to be statistically significant, which rejects Hypothesis 1. However, brand awareness has a significant positive effect on brand loyalty (c1 = 0.1332, p-value = 0.001), thereby Hypothesis H6a is supported. Overall, CS fails to play a mediating role in the relationship between BAw and BL.

Next, brand association has a significant positive effect on customer satisfaction (a2 = 0.07), it also has a positive effect on brand loyalty (c2 = 0.5062). Therefore, Hypothesis 2 and 6b are supported, which means that CS has a partial mediating effect on the relationship between BAs and BL with a total effect equal to 0.5354.

Perceived quality has a significant effect on customer satisfaction (a3 = 0.9414, p-value = 0.000); however, it is not statistically significant for the regression of brand loyalty on perceived quality (p-value =0.818). Therefore, Hypothesis 3 is supported while Hypothesis 6c is rejected. It also implies that CS has a full mediating effect on the relationship between PQ and BL.

In terms of the final variable - Price premium, table 10 shows that it has significantly positive effects on both customer satisfaction and brand loyalty (a4 = 0.04, c4 = 0.25, p-value < 0.05). Thus, Hypothesis 4 and 6d are all supported, entailing that CS has a partial mediating effect on the relationship of Pri and BL with the amount of indirect and total effect respectively equal to 0.0168 and 0.2653.

In addition, customer satisfaction positively affects brand loyalty (b = 0.4192, p-value = 7.30E-08). Therefore, Hypothesis 5 is supported.

Regarding control variables in the SEM model, age and annual income play important roles in creating non-causal links between variables and limiting omitted variables phenomenon in the research (Bhandari 2021). In the regression of customer satisfaction, both of them fail to predict customer satisfaction because of statistically insignificant p-values. In contrast, these two variables are statistically significant in the regression of brand loyalty. With given p-values greater than 0.05, age and income correlation coefficients are 0.0744 and -0.023, respectively. Thus, while age has a positive effect on brand loyalty, income has a negative one on brand loyalty.

## Discussion

### 4.4.1. Compare the results between Linear Moderation Model and SEM

The findings related to hypothesis test and mediating role of customer satisfaction in the relationship between each dimension of CBBE and brand loyalty are given in Table 19 and 20, as follows:

|  |  |  |  |
| --- | --- | --- | --- |
| **Hypothesis Number** | **Relationship** | **Linear Moderation Model** | **SEM** |
|  |
| H1 | Brand Awareness -> Customer satisfaction | Not supported | Not supported |  |
| H2 | Brand Association -> Customer satisfaction | Supported | Supported |  |
| H3 | Perceived Quality -> Customer satisfaction | Supported | Supported |  |
| H4 | Price Premium -> Customer satisfaction | Supported | Supported |  |
| H5 | Customer Satisfaction -> Brand Loyalty | Supported | Supported |  |
| H6a | Brand Awareness -> Brand Loyalty | Supported | Supported |  |
| H6b | Brand Association -> Brand Loyalty | Supported | Supported |  |
| H6c | Perceived Quality -> Brand Loyalty | Supported | Not supported |  |
| H6d | Price Premium -> Brand Loyalty | Supported | Supported |  |

Table . Result of hypothesis test

|  |  |  |
| --- | --- | --- |
| **Key Explanatory Variable** | **Linear Moderation Model** | **SEM** |
| Brand Awareness | No Mediation Effects | No Mediation Effects |
| Brand Association | Partial Mediation | Partial Mediation |
| Perceived Quality | Partial Mediation | Full Mediation |
| Premium Price | Partial Mediation | Partial Mediation |

Table . Result of Mediation Analysis

It can be easily seen that Hypothesis 6c contains a contradiction between two separate models, leading to a difference in the mediating role of Customer Satisfaction in the relationship between Perceived Quality and Brand Loyalty. In particular, while the Linear Moderation Model accepted H6c and confirmed a partial mediating role of CS, the SEM gave the opposite results.

It can be explained through two main differences between standard regression and structural equation modelling. The first is that regression is designed to only handle observed variables, but SEM can handle both latent construct and observed variables (Cheng 2001). Thus, SEM is employed to show the interrelationships of latent variables and with its outcome. More importantly, according to Bollen and Pearl (2013), the results of the same equation used in standard regression analysis and in SEM are different because they are based on different assumptions. In particular, the primary goal of regression analysis is mere prediction about a statistical relationship based on a priori assignment of each variable as either a cause or an effect (MacKinnon and Fairchild 2009). Meanwhile, SEM can be used to capture dual causations, the simultaneous nature of the indirect and direct effects or bidirectional causality via a conceptual model, path diagram, and mathematical equations (Kraemer et al. 2001). This is also the reason why SEM is a more appropriate inference framework for mediation analyses than linear regression analysis (Gunzler et al. 2016). Therefore, the arguments related to the findings in the below discussion part will be based on the final results of the SEM model.

### 4.4.2. Discuss about the results of Hypothesis Test and Mediation Analysis

At a significance level of 0.05, this study fails to prove that every dimension of consumer-based brand equity has a significantly positive effect on both customer satisfaction and brand loyalty as the previous studies which are presented in the Literature review chapter. In particular, the brand awareness dimension does not significantly and positively affect customer satisfaction and brand loyalty as well. This can be attributed to the fact that brand awareness does not reflect completely as a result of the customer's experience with the brand, just creates a familiar feeling of customers on products. In fact, recognition and recall of brand awareness are merely formed from the process of marketing campaigns of the companies in order to attract the attention of potential customers, enhance the degree of customer recognition or promote new products (Sanchez 2014). Meanwhile, customer satisfaction represents every impression, interaction and relationship of a customer after using a brand’s product or service (Zhao et al. 2017). This touchpoint between a customer and a brand, if positive, creates advocacy, as a result, increases a customer’s satisfaction and loyalty (Bordeaux 2018). Thus, it is difficult for a positive brand awareness to increase customers’ satisfaction and loyalty if they lack the actual experience of this brand's products or services.

Different from brand awareness, brand association positively affects customer satisfaction and brand loyalty. As such, customer fulfilment partially mediates the effect of this CBBE’s dimension upon brand loyalty. This result can be related to the fact that brand association reflects the customers’ sentiment and attitude towards a brand (Muhammad and Bhaya 2017). Feelings, thoughts, experiences, perceptions, images and beliefs are established in memory; gradually, they become customers’ knowledge about the brand and exist as the brand presence strength in the minds of consumers (Aaker 1991). Consequently, the way brand association is related to positive or negative information in customers’ minds is the results of corresponding experiences with the brand. In other words, positive brand association reinforces customer satisfaction towards the brand. Additionally, if brand associations relating to benefit, attributes and product quality fulfill customers’ expectations in a sustainable and long - term way, they tend to trust and be loyal to the brand (Phong et al. 2020). The findings are also observed in the research of Hawary (2013) and Muhammad and Bhaya (2017).

With regards to perceived value, this dimension is proved to have a positive effect on customer satisfaction, but has no relationship with brand loyalty, which entails that customer satisfaction plays a full mediating role in the path of perceived quality impacting brand loyalty. This can be attributed to distinct perception of customers upon a brand’s product quality. In particular, perceived quality is overall judgments of the customers about the excellence or superiority of a product or service (Snoj et al. 2004). As such, a higher level of a product’s quality meets better customers’ requirements, which results in greater satisfaction (Susanti 2013). However, the perceived quality of each individual is different and dependent on personal sense and experience in different circumstances (Marakanon and Panjakajornsak 2017). To illustrate, in today’s competitive world, customers require creativity, appreciation, customization and surprise in a product (Kaufman 2019). Therefore, to improve customer loyalty, businesses are constantly working hard in order to meet continuously changing standards, and exceed expectations of their customers. In other words, the perceived quality of customers at a given time does not reflect their loyalty to the brand.

Similar to brand association, price premium is proved to have concretely positive effects on both customer satisfaction and brand loyalty, which makes customer satisfaction partially mediate on the relationship between price premium and customer loyalty. This can be easily explained by the fact the price premium itself reflects customers’ positive attitudes and behavior towards a brand - they are willing to pay a higher price for this brand than for other brands in the same category (Ailawadi et al. 2003). In strategic business management, offering a more expensive product or service than competitors in the same industry is often referred to as price - quality signalling. It means that the higher a price than competitors’, the better quality the product is (Bitca 2016). Thus, customers are more satisfied with a brand’s product if it costs more. According to Rothenberger (2015), customers tend to develop a loyal and satisfied relationship with a brand if its products are priced reasonably. Here, a fair price, no matter how high or low, offers values equal to its cost. The price fairness has a significant positive impact on customers’ opinion of the product, brand and company (Kaura et al. 2014).

With regard to control factors, research results confirmed that age and income have significant influence towards customer loyalty. In particular, a higher age group results in a higher level of brand loyalty. It can be attributed to the fact that this kind of demographic plays a role in determining a customer’s shopping personality. According to Sandra Gudat (2018), shopping personalities change over the lifetime of a customer; for example, people aged 35 to 45 tend to shop around, while older customers (aged 55-65) tend to stick and be loyal with a brand’s product that satisfies their expectation. However, income is a factor that negatively affects loyalty, which means the level of a customer’s loyalty decreases when his income increases. It is also partially related to shopping personality, the higher the income, the more likely a customer will shop around to find products that meet their new needs (Gudat 2019, Klopotan et al. 2016). That's why businesses need to diversify product categories to meet diverse demands of different customer backgrounds.

# CHAPTER V: CONCLUSION

## 5.1. Summary

The purpose of this study was to determine how customer satisfaction mediates the relationship between customer-based brand equity and loyalty through investigating the relationship between every dimension of customer-based brand equity, customer satisfaction and brand loyalty. To begin with, the research draws out the literature and theoretical framework of relevant definitions; simultaneously, provides the arguments relating the links between customer satisfaction and brand equity, and brand loyalty in order to develop research hypotheses. Afterward, following the outline of “research onion”, the research’s methodology is clarified from research philosophy to data collection. Data analysis chapter includes descriptive statistics, Cronbach’s Alpha reliability test, Pearson correlation analysis, linear mediation model and structural equation modelling (SEM). The European data set is analysed to investigate the final statistical relations between the outcome variable, the mediator and explanatory variables. At a significance level of 0.05, the results support that there are only brand associations and price premium that have significantly positive effects on both customer satisfaction and brand loyalty. Meanwhile, brand awareness has no relationship with these dependent variables, and perceived quality only positively affects customer satisfaction. The findings, no matter how inconsistent with the previous theoretical foundation or not, are all appropriately explained by other actual knowledge in the discussion part.

## 5.2. Implications

### 5.2.1. Theoretical implications

This research contributes to the understanding of customer satisfaction as a mediating role in the relationship between customer-based brand equity and brand loyalty. Many previous studies on this topic used a variety of brand equity constructs, however, none of them used Aaker's brand equity models to establish the factors affecting customer satisfaction and brand loyalty. Therefore, by combining 4 dimensions - brand awareness, brand association, perceived quality and price premium - as key determinants of brand equity, this research builds new materials for the relevant existing literature. In addition, this study provides a new perspective about the relationship between four dimensions of brand equity and customer satisfaction, brand loyalty. Previous research suggested that these components have positive effects on the outcome variables and the mediator; however, the empirical evidence of this research proves that not all mentioned relationships are significantly positive. These unprecedented findings contribute to the existing body of knowledge about the effect of brand equity on the levels of customer fulfilment and loyalty. Finally, this research has broadened the scope of the existing research scope in terms of industry. Specifically, it was implemented with the survey covering a wide range of products and services. While previous studies were limited within a certain country and a product/service. For example, Nam et al. (2011) investigated the hotel and restaurant industry in the UK, Susanty and Kenny (2015) with the research related to coffee shops conducted in Indonesia or Ahmad and Sherwani (2015) with an empirical study of mobile phones in India.

### 5.2.2. Managerial implications and recommendations

The research findings reflect that customer satisfaction positively mediates the relationship between 3 out of 4 dimensions of brand equity and brand loyalty. Therefore, business managers should concentrate on increasing customers’ satisfaction to thoroughly optimize their loyalty upon the brand because customer loyalty helps businesses gain a high market share, attract new customers, develop brand scale, reduce marketing cost and strengthen the brand’s competitive advantages. Also, three particular managerial implications of improving brand equity can be derived from the findings. Firstly, marketing managers should focus on improving customer experience in addition to marketing programs so that the brand in the customer's memory is not only an image and recognition but also a familiarity, trust and attachment that is considered as a result of positive actual experience. Secondly, in the highly competitive world today, enhancing perceived quality should also be a priority, the research and development department of enterprises should invest in evaluating and increasing the quality and design of their product and service, to attract new customers and retain old customers. Finally, it is extremely important to have an appropriate pricing strategy. As mentioned, a reasonably priced product positively affects customer satisfaction. Thus, it should be ensured that customers perceive that they are using a valuable product and service, which helps businesses easily increase prices if necessary and still retain the customer base.

## 5.3. Limitations

Although the current research makes contributions to the existing brand management literature, it has some limitations that should be considered. First, the data is collected from the respondents in three different countries of Europe - the UK, Germany, and Greece. Although the number of observations is relatively large (N=1512), that it is specific to a certain culture (Europe) makes results of the research can not be generalized to the entire population. The second limitation of the research is the lack of another important mediator - customer experience. Throughout the research, customer experience shows the difference between brand awareness and the other three dimensions when observing their effects on customer satisfaction and brand loyalty. As mentioned, brand awareness has no relationship with customer satisfaction and loyalty because of the lack of actual experience with the brand's product or service. According to Quinn (2016), brand equity is built on customer experience; or the more customers have a positive experience with a brand, the higher the brand equity. Therefore, the research model lacks some comprehensiveness when this important variable is missing.

## 5.4. Recommendations for further research

The result of findings and research limitations mentioned above suggests some recommendations for further research in the future. To begin with, future research should attempt to investigate brand equity, customer satisfaction and brand loyalty on a broader scale, not limited to a certain region or country. That means studies need a larger number of observations that are enough to generalize to the entire population. Furthermore, the research model of future similar studies should consider adding the customer experience variable into the model as a mediating factor in the relationship between brand equity and brand loyalty, which is similar to customer satisfaction. Such a multiple mediation model will help the research become more complete and comprehensive.

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# APPENDICES

***Appendix 1. Table of the questions for key variables***

|  |  |  |
| --- | --- | --- |
| **Dimension** | **Item** | **Name code** |
| Brand Loyalty  (BL) | I feel loyal to this brand  This brand is my first choice  I am committed to this brand  I would be prepared to compromise something important to own this brand  I am willing to make small sacrifices to use this brand  I would be prepared to go out of my way to get this brand | LOYAL1  LOYAL2  LOYAL3  SACFRIF1  SACRIF2  SACRIF3 |
| Brand Awareness (BAw) | I have heard of this brand  I am quite familiar with this brand  I can quickly recall the symbol, logo or colour of this brand  This brand has strong associations  This brand has favourable associations  It is clear what this brand stands for | AWAR1  AWAR2  AWAR3  ASSOC1  ASSOC2  ASSOC3 |
| Brand Association  (BAs) | It is a feeling of loss when I have not used this brand for a while  Something would definitely be missing in my life when this brand would not exist anymore  This brand and I have lots in common  This brand reminds me of who I am  This brand has personal relevance to me | ATTACH1  ATTACH2  SELF1  SELF  RELEV3 |
| Perceived Quality (PQ) | This brand is good quality  This brand has excellent features  Compared to other brands in its category, this brand is of very high quality  This brand delivers what it promises  This brand's product claims are believable  This brand has a name you can trust | QUAL1  QUAL2  QUAL3  TRUST1  TRUST2  TRUST3 |
| Price Premium (Pri) | The price of this brand would have to go up quite a bit before I would switch to another brand in this category  I am willing to pay a higher price for this brand than for other brands in this category  I am willing to pay a lot more for this brand than other brands in this category | PRICE1  PRICE2  PRICE3 |
| Customer Satisfaction (CS) | You are very satisfied with the brand you specified  This brand meets my expectations  I feel confidence in this brand  This brand never disappoints me | SATISFAC  RELIAB1  RELIAB2  RELIAB3 |

***Appendix 2. Pearson Correlation Significant (P-value)***

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | BL | BAw | BAs | PQ | Pri | CS |
| BL | 0 | 2.38E-99 | 0 | 0 | 0 | 0 |
| BAw | 7.9E-100 | 0 | 1.79E-70 | 4.5E-145 | 1.68E-83 | 8.9E-124 |
| BAs | 0 | 1.79E-70 | 0 | 9.9E-255 | 8.8E-296 | 1.3E-278 |
| PQ | 0 | 9.0E-146 | 1.6E-255 | 0 | 3.6E-269 | 0 |
| Pri | 0 | 8.39E-84 | 9.8E-297 | 5.1E-270 | 0 | 5.6E-297 |
| CS | 0 | 2.2E-124 | 1.6E-279 | 0 | 5.6E-298 | 0 |

***Appendix 3. Modification Index***

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | lhs | op | rhs | mi | epc | sepc.lv | sepc.all | sepc.nox |
| 678 | SACRIF1 | ~~ | SACRIF2 | 862.5389 | 0.763672 | 0.763672 | 0.882851 | 0.882851 |
| 417 | ATTACH1 | ~~ | ATTACH2 | 546.8728 | 0.782995 | 0.782995 | 0.764271 | 0.764271 |
| 185 | C\_Satisfaction | =~ | ASSOC2 | 498.6516 | 0.628477 | 1.151454 | 0.599405 | 0.599405 |
| 161 | P\_Quality | =~ | ASSOC2 | 494.3321 | 0.64951 | 1.187483 | 0.61816 | 0.61816 |
| 683 | SACRIF2 | ~~ | SACRIF3 | 447.135 | 0.585694 | 0.585694 | 0.623131 | 0.623131 |
| 199 | C\_Satisfaction | =~ | LOYAL2 | 445.1871 | 0.722273 | 1.323301 | 0.573529 | 0.573529 |
| 173 | P\_Quality | =~ | LOYAL2 | 399.837 | 0.650936 | 1.190091 | 0.515794 | 0.515794 |
| 211 | B\_Loyalty | =~ | ASSOC2 | 377.2952 | 0.511615 | 0.941348 | 0.490031 | 0.490031 |
| 522 | QUAL1 | ~~ | QUAL2 | 363.4601 | 0.346094 | 0.346094 | 0.59579 | 0.59579 |
| 679 | SACRIF1 | ~~ | SACRIF3 | 347.1047 | 0.527128 | 0.527128 | 0.545479 | 0.545479 |
| 462 | SELF1 | ~~ | SELF2 | 335.2128 | 0.534104 | 0.534104 | 0.625081 | 0.625081 |