THE ROLE OF LOGO DESIGN IN BUILDING BRAND EQUITY

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1 Introduction

The core objective of the research study is to fulfill the proposed research question “How does the logo design influences the brand equity?”

1.1 Academic relevance

Today, branding is much more developed concept than ever before and the visual designs that include logo design, website design, package design, stationery design, and color are the essential part of the brand that communicates to its targeted customers. In this cutting-edge, we are facing with a variety of choices between young and corporate brands. Simply, the brand is a significant powerful symbol that represents each specific own value of a company to differentiate itself from the competitors. Historically, the reinforcement of a strong brand has been the objective of every company (Stamatogiannakis, Luffarelli, & Yang, 2015). For the reason that it offers numerous advantages to be differentiated from others, such as strong customer relationship, greater distribution channels, wide extension in the market, an increase in profits, etc. Thus, in order to achieve a strong brand, the term brand equity has developed. There are different ways in order to create strong brand equity; one of the feasible ways is creating through visual design. As a fundamental tool, the design is the core differentiator and strategic tool for the brand in the hyper-competitive market. The use of visual design in a brand can operate in several different ways including package, website, logo, product design, stationery design, etc. Each of the elements has its own role in order to assist in building strong brand equity. Among the brand elements, the logo is the first and strongest visual representative.

In terms of marketing theory, angular and circular logo shapes influence product and brand attributes where they stimulate strength and harmony associations (Jiang, Gorn, Galli, & Chattopadhyay, 2016). Moreover, the aesthetic of the brand elements, which is the design, is becoming an increasingly significant investment for the brands and products. Thus, in this paper, we are specifically focusing on the shape of a logo by proposing the research question.
1.2 Business relevance of the research question

The logo is the most visible key component that has a striking role. Logos are the visual communication of the brand; therefore, it helps transcend language barriers (Pittard, Ewing, & Jevons, 2007). When consumers think of a brand, they start generalizing the brand logo in the first step, since visual elements have an ability to be recalled easily and more quickly than the verbal elements (Pham, Pallares-Venegas, & Teich, 2012). Therefore, brands prefer having a well-designed logo. In fact, successfully designed logos are judged by a considerably high amount of money. For instance, the Pepsi logo redesign in 2008 cost $1 million and the 2012 Olympics logo in London costs $625,000 (van Grinsven & Das, 2016). These values show how important is the logo in order to create strong brand equity. In particular, each element of a logo has effects on the perception of consumers. Moreover, the shape of a logo represents the brand attribute. Precisely, consumers react differently to the brand depends on a logo shape. In order to understand this effect of logo shape, the present research develops and tests the framework.

1.3 Structure of the thesis

The structure of our thesis work will start presenting the general background information of the topic. In the following chapter, we will revise the previous literature reviews related to our topic that supported our paper to become more substantial.

The third chapter is a theoretical framework, where we will mainly discuss our background theories, in the other words backbone of the research work, by start presenting the branding, which is our general topic that contains the brand design elements, and brand equity. A logo is one of the fundamental brand design elements, which we are particularly focusing on our research work. Further, we will deliver the core brand-equity models. Finally, yet importantly, we will cover the effect of design principles specifically narrowing down to logo design effect.

The fourth chapter is the most important part of our thesis work. In this section, we will present our research concept with its research question by identifying the objective of our study and research model followed by the hypotheses that we are going to test from the analysis.
The fifth chapter will discuss the methodology, where we are using a quantitative method in order to get precise data from our sample. The research instrument that we are utilizing in our study is an online survey due to the reachability to the target sample. Moreover, we will discuss the development of our survey questionnaire followed by data analysis. The remaining chapters will discuss the research findings with its precise analysis and result of the quantitative research work followed by the conclusion of our thesis work.

1.4 Applied research method

The research method will be applied and conducted in this research paper is quantitative research method; particularly we will work on non-experimental method, where it provides us the online survey research, which we are aiming to apply for the study. Therefore, in order to reach the potential audience, the research work will preferably utilize the snowball sampling method.

2 Literature Review

This chapter aims to review the most relevant literature that has been already studied in the field. The design has been studied from different perspectives, but in this paper, we will focus more on logo design since it is one of the most important tools in branding (Gancho, Cooper, & Evans, 2016). Relatively, not many research papers have been undertaken to study the logo shapes in terms of design. Prior literature has been examined the effect of the circular and angular logo effects on the product or company attribute judgments (Jiang, Gorn, Galli, & Chattopadhyay, 2016). Nevertheless, the research paper of Jiang, Gorn, Galli, & Chattopadhyay (2016), does not relate with the brand, rather than focused on the product and company attribute judgments. Thus, in this thesis work, we are addressing to fill this gap by examining the effect of logo shapes particularly circular and angular shapes on brand equity. To make it clear, circular shapes are the extent to which the logo consists of curved lines while angular shapes integrate by sharp angles (Jiang, Gorn, Galli, & Chattopadhyay, 2016).

Another recent research papers particularly focused on the redesign of a logo (Walsh, Page Winterich, & Mittal, 2011). Not every, but 1 in 50 companies change their
logo in a given year (Walsh, Page Winterich, & Mittal, 2010). For some brands such as FedEx, this logo redesign brings immense value, but in some other cases it affects less favorably, customers might respond it imperfectly. Henderson & Cote (1998) are other core researchers that examined the logos. The authors established 13 different dimensions that relate to logos, such as naturalness, harmony, elaborateness, repetition, proportion, and shape. According to Henderson & Cote’s (1998) research, it has been founded that roundedness of a logo is a key design element.

In order to see the effects of circular and angular shapes on each component of the brand equity model, we are aiming to focus on Keller’s (1993) customer-based brand equity model. Brand resonance pyramid has been created to build strong brand equity; the pyramid consists of six brand building blocks (salience, performance, imagery, judgments, feelings, and resonance) and four steps (identity, meaning, response, and relationship) to reach to the highest level, which is the resonance.

3 Theoretical Framework

This chapter demonstrates the review of the background theories in the field of branding and its design elements by narrating logo design effectiveness on brand equity. We will particularly focus on logo among the brand design elements in order to indicate the effect on brand equity. Further, we will present certain brand equity models with its extensive components.

3.1 Branding

In the business sector, the term “Branding” has been researched a decade and still in high consideration for the scholars. Branding is not only just a name, but it is also an outstanding perception of the business for its consumers, therefore, it contains the enormous value of the company or a product that must be continuously enlarged. There is no exact definition of the brand, which we can focus on. Historically, branding has been a trademark for the craftspeople in Europe to differentiate their products and has been legal protection for themselves (Kotler & Keller, 2012).

According to the American Marketing Association, the term brand has defined as “a name, term, sign, symbol, or design, or a combination of them, intended to identify
the goods or services of one seller or group of sellers and to differentiate them from those of competitors” (Kotler & Keller, 2012, p. 241). Thus, branding is a way to identify and protect own products or services from the competitors (Aaker, 1991), also it is a representation of the business in the client’s mind. In the competitive business market enormous number of brands strengthening their brand by communicating with different strategies to build the intangible asset.

3.2 Brand design elements

The brand element is a part of the brand’s tangible product where it speaks with customers indirectly by its visual and verbal information. As Kotler and Keller (2012, p. 250) stated, “brand elements are devices, which can be trademarked, that identify and differentiate the brand”. The primary brand elements are brand names, logos, symbols, characters, spokespeople, slogans, jingles, package, and signage (Farhana, 2012). Those visual elements might be an effective tool for brand awareness and brand loyalty since the visual elements can be remembered strongly and learned significantly longer than verbal elements (Henderson, Cote, Leong, & Schmitt, 2003).

Visual elements have a significant role in marketing and business sector, especially in branding. Every piece of the visual element represents at least one message to the ideal target audience.

3.2.1 Logo

Researchers have found that the logo is a salient brand identity among the various brand elements (Walsh, Page Winterich, & Mittal, 2010). A logo is a part of a brand that communicates with the whole audience with its simple or complex design; therefore, the logo has an enormous ability to represent the meaning of the brand. This small visual element has a huge effect; hence, the logo is better recognized than verbal elements (van Grinsven & Das, 2016). Behind the increase of brand recognition, it enhances brand loyalty at the same time (Pham, Pallares-Venegas, & Teich, 2012). According to Miceli, Scopelliti, Raimondo, and Donato (2014) “A logo is the set of graphic design elements associated with a brand and represents a fundamental tool of the brand communication strategy”. A combination of graphic design elements including shape, color, and letters create this valuable communication tool. Thus, the logo can be defined as a brand communication tool for a company, besides the
branding, the logo is also a part of a design. On the other hand, from the perspective of design thinking, logo has described in this way “A logo is a graphic symbol, designed to represent the character of a company, product, service or other entity” (Ambrose & Harris, 2010, p. 90). From both perspectives, we see that the logo is a representation of a brand, company, product or service that has the power to engage with customers and build recognition. Logos also associate with their customers through their fundamental meaning. In some cases, abstract logos are uncertain; consumers may not understand what exactly the logo is representing through its deep meaning (Keller, Aperia, & Georgson, 2012). On the other hand, it has been deeply recognized in the consumer’s mind. Selecting or making the logo is an excessively hard task for the management of a brand since the logo requires many details such as color, graphics, and layouts which every element play a highly important role (Pham, Pallares-Venegas, & Teich, 2012).

3.2.1.1 Logo design

Logo design has a straightforward link with marketing communication since it represents the brand and becomes a stimulus of brand equity. A successfully designed logo has a substantial effect on brand recognition, brand image, and communication with customers. A logo with a lack of design even might have a negative effect on consumer response back to the company. According to Kohli & Suri, (2002) logo design has two facets: content and style. Content consists of elements that included in a logo, such as text and graphic representations, alternatively visual elements. Style represents how these visual elements are presented (Kohli & Suri, 2002). In the logo design literature, it has been well described that visual design particularly identifies brands, generates brand recognition and brand image (Luffarelli, Stamatogiannakis, & Yang, 2019). Therefore, Bo van Grinsven & Das (2016) proved that the complexity of design on the logo has a strong influence. Logos that have a less color, line, and layout have determined as a simple logo, whereas logos that have dissimilarity, irregularities between the many different colors, lines, and layouts referred as a complex logo (Pieters, Wedel, & Batra, 2010). According to van Grinsven and Das’s (2016) study, complexly designed logos are faster recognized with repeated exposures and favorable for long term, while the simply designed brand logo is easily remembered and valuable for short term. The finding also demonstrated that increased exposure boosted liking of complex logo design (van Grinsven & Das, 2016). Moreover, further research has found
that asymmetrical stimuli require more extensive investigation since it includes more visual information than symmetrical stimuli, besides, the asymmetrical stimuli assigned as arousal for individuals (Luffarelli, Stamatogiannakis, & Yang, 2019). Therefore, customers from different nationalities perceive different logo elements. According to the study, Asian cultures perceived natural and harmonious logo designs more favorably, while Western cultures perceived asymmetric logo design more positively (Walsh, Page Winterich, & Mittal, 2010).

3.2.1.2 Logo shape

Researchers have examined that the shape of a logo also has an influence in perceptions and plays in a key role (Walsh, Page Winterich, & Mittal, 2010) in building brand equity. In the design world, there are enormous logos designed in different shapes. In general, the shape of a logo design varies by its two versions: circular and angular. It is definitely hard to determine the exact circular or angular shapes, but in general circular shapes are more curved and without any sharp angles, while angular shapes have many lines with sharp angles. Researchers have found that circular and angular shapes represent distinct traits (Zhang, Feick, & Price, 2006). Circular shapes illustrate friendliness, harmony, softness, and approachableness while angular shapes demonstrate energy, toughness, and strength (Zhang, Feick, & Price, 2006). Thus, the circular shape of a logo perceived as the key design element (Walsh, Page Winterich, & Mittal, 2010). A more intense study has been conducted to express the circular and angular shapes, respondents of the experiment described circular shape as a calm, smooth, and gentle, whilst, the angular shape has been described as a hard, harsh, and cruel (Jiang, Gorn, Galli, & Chattopadhyay, 2016). Moreover, Zhang, Feick, & Price (2006) revealed that collective cultures prefer circular, whilst, angular shapes are associated with individualistic cultures. Recently, another research has been conducted and demonstrated that a circularly shaped seating arrangement elicit a need to belong while an angularly shaped seating arrangement elicit a need to uniqueness (Zhu & Argo, 2013).
3.2.2 Color

Consumer’s decision in purchasing product has based on several drivers. One of the strongest factors that affects is the color. Consumers tend to react differently to the same products that has different colors, which means color directly links with customer’s purchase decision. Color can make things stand out and define objects stronger and attractive (Ambrose & Harris, 2010). Eye-catching color would definitely produce a positive consequence (Mohebbi, 2014) to the brand. In this case, attractiveness would play in key role. Moreover, it is vital to mention here that color has a strong effect on consumers’ behavior, therefore, they have various thoughts and perceptions on the logos or products that have different of colors. The viewpoint of the color has greatly influenced by individuals’ psychological and physiological interest, personal experience, age, gender, etc. (Mohebbi, 2014). In the consequence, brand managers and designers can design the products with different colors’ connotations by holding the advantage of production. Figure 1 illustrates the connotations of some particular colors.

<table>
<thead>
<tr>
<th>Color</th>
<th>Connotation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blue</td>
<td>Uniform, reliable, safe, traditional, constant</td>
</tr>
<tr>
<td>Pink</td>
<td>Passionate, flamboyant, attention-seeking</td>
</tr>
<tr>
<td>White</td>
<td>Purity, innocence, goodness, clinical</td>
</tr>
<tr>
<td>Black</td>
<td>Magical, dramatic, elegant, sinister, bold</td>
</tr>
<tr>
<td>Green</td>
<td>Natural, foliage, plentiful, luscious, expensive</td>
</tr>
<tr>
<td>Red</td>
<td>Exciting, dynamic, dramatic, aggressive</td>
</tr>
</tbody>
</table>

Figure 1. Color connotations (Ambrose & Harris, 2010, Design Thinking, p. 129)

3.2.3 Brand design element choice criteria

In order to choose brand elements, there are six criteria to take into account. The first three criteria stand for brand building, which is memorable, meaningful, and
likable. The rest of the three criteria are for defensive: transferable, adaptable, and protectable (Kotler & Keller, 2012).

- **Memorable** - Brand elements must be seen as memorable as possible in order to be recalled or recognized. This criterion has an essential contribution to brand equity by easy remembering (Kotler & Keller, 2012).
- **Meaningful** - Inherent meanings also contribute to and enhance the formation of brand associations. The meanings differ by their descriptiveness and persuasiveness (Kotler & Keller, 2012).
- **Likable** - In other cases, brand elements tend to be more attractive and interesting if the name, logo or symbols are more aesthetically appealing for customers.
- **Transferable** - This criterion determines how the brand element, which is the name, logo, or slogan, can easily be transferred across categories. If the brand name transferable among the categories it will be helpful for customers to settle in their mind. Kotler and Keller (2012) have mentioned that companies must review its brand elements for cultural meaning before launching the brand into a market, since the verbal elements could be changed in other languages in case of different cultural market.
- **Adaptable** - The elements must be updated over time. Because consumer values and opinions are constantly changing. Thus, the more adaptable the brand elements, the easier it is to update it (Kotler & Keller, 2012).
- **Protectable** - The most considerable criteria is whether the brand elements are protected by legally or in a competitive sense. If the brand elements did not protect well by legally the brand has a chance to lose its brand equity (Kotler & Keller, 2012).

### 3.3 Brand equity

Brand equity has been described by many researchers (Aaker 1991, Brakus 2009, Kotler 1997) based on several brand equity model by questioning “how to build a strong brand?” According to Kapferer (1988), the term brand equity occurred during the immense time of mergers and acquisition where the large companies were interested in
the power of the brands. In the 1980s, several academics and executives defined brand equity mostly from the perspective of value-added product and customers. Brand equity has regarded to build brand awareness, brand loyalty, and brand association to enhance consumer relationship with the brand. Therefore, the brand equity term has studied from two different perspectives. The first perspective of brand equity is financial based brand equity. In order to measure financial based brand equity, an accounting method has developed by researchers (Lassar, Mittal, & Sharma, 1995). The second perspective is customer-based brand equity where we will particularly focusing; therefore, it is effective for identifying marketing variables for the marketing executives (Lassar, Mittal, & Sharma, 1995).

3.3.1 Aaker’s Brand Equity model

Aaker (1991, p. 15) defines brand equity as “a set of brand assets and liabilities linked to a brand, its name, and symbol that add to or subtract from the value provided by a product or service to a firm/or to that firm’s customers”. Aaker’s (1991) brand equity model also illustrates that brand equity generates a value for both to the customer and the firm. He also argued that brand equity has an influence on the customer’s purchase decision. According to the brand equity model that illustrated in Figure 4, there are five components, which identify brand equity: brand loyalty, name awareness, perceived quality, brand association, and other proprietary assets.

Brand loyalty is a repetitive purchase of potential customers from the same brand or an extent where customers are loyal to the brand (Tanveer & Lodhi, 2016). It enlarges the brand value by reducing marketing expenses (Brand, 1999). Moreover, brand loyalty also reported as “consumers have a deep commitment to rebuy the product with the use of the same brand” (Tanveer & Lodhi, 2016). According to Aaker’s (1991) model, brand loyalty has five levels (Figure 2) that also represents a different marketing challenge. The ground level is indicating non-loyal customer, identified as a price buyer. The next level of loyalty has customers who are satisfied with their products, also stated as habitual buyers. The third level includes satisfied buyers as well, but with switching costs. The fourth level buyers have seen as respected users that who have loved the brand in the case of brand experience or high-perceived quality. In addition, there might be an emotional attachment. The highest level of the loyalty pyramid consists of consumers who see the brand as a very important part of their life. They are
committed customers, who can recommend the brand to the others as well (Aaker, 1991).

![Figure 2. The Loyalty Pyramid (Aaker, 1991, p. 40)](image)

**Brand awareness** is a major constituent for brand equity that is consisted of three levels (Figure 3). Brand recognition is the lower level when a customer has already have seen, previously heard the product, or has an experience with the product that has linked with past exposures. Therefore, brand recognition only occurs when the consumer makes a decision on the point of purchase. The second level is recalling the product to the mind when the product class has mentioned, the term has called “unaided recall” which is harder than recognition. Lastly, the highest level of brand awareness is a top of mind, where the first named brand in an unaided recall (Aaker, 1991).

![Figure 3. The Awareness Pyramid (Aaker, 1991, p. 62)](image)

**Perceived quality** is generally defined as the customer’s perception of the quality of the products and services. One of the influencing drivers for purchase decision or brand loyalty is the perceived quality. Therefore, brands with high-perceived quality have a high chance of probability to extend its profitability by charging a premium price, which is an advantage of the component. It is mostly used for brand building activities. Products that have higher quality tend to be favored and it will gain a
higher share of the market. In addition, perceived quality does not engage with negative cost (Aaker, 1991). **Brand association** is generally determined as every activity, product, service, and other brand-related obsessions that are deep settled in the customer’s mind about the brand. The brand association gets stronger when the network increases by its supportive links with many experiences. The strength of brand association relies on how consumer receives the information in their mind. Aaker (1991) indicated that positioning is nearly related to the association since brand positioning also delivers perception about the brand. Therefore, a well-positioned brand will have strength through its strong associations.

**Other proprietary brand assets** are the fifth component of the Aaker’s (1991) brand equity model and stated as a value of the brand equity. Other proprietary brand assets consist of patents, trademarks, and channel relationships (Aaker, 1991). Those assets considered as the most vital value because each of its power can compete in the market without any barriers. For instance, trademarks are the defending tool from the competitors where customers might face confusion from the symbols and packages.

![Brand Equity Model](image)

*Figure 4. Brand Equity Model (Aaker, 1991, p. 17)*
3.3.2 Customer Based Brand Equity model

A further study from the customer’s perspective of the brand equity is the Customer-Based Brand Equity (CBBE) model established by Keller (1993). Keller (1993, p. 244) defined his concept as “the differential effect that brand knowledge has on consumer response to the marketing of that brand”. Based on his statement brand equity can have a positive or negative customer-based brand equity, depending on a consumer’s reaction to a product. If consumers react generously to the product then brand equity will have positive customer-based brand equity (Kotler & Keller, 2012). In the consequence, consumers will be less sensitive on pricing and more respectable on brand extension, if the customer based brand equity results positive (Keller, Aperia, & Georgson, 2012). Thus, consumers have been experiencing and being a master about the brand over time. As such, according to consumer-based brand equity model, the power of brand stands in the minds of consumers (Keller, Aperia, & Georgson, 2012). In case of successful evaluation from the consumers to the product, it can be identified by its brand elements and brand identity. Moreover, a high level of awareness and familiarity with the brand and strong brand associations create customer-based brand equity (Keller, Aperia, & Georgson, 2012). They have stated that brand awareness alone has an ability to result in favorable consumer response. However, in most cases, its unique and favorable brand association, which plays, has created brand equity in a critical role.

In order to build strong brand equity regarding the CBBE model, Keller (1993) has demonstrated the CBBE pyramid (Figure 5) that consists of six brand building blocks and four steps that the brand must achieve.

**Brand salience**

The first brand building block is the brand identity, where the brand should identify itself by raising brand awareness, and it begins with *Salience* where it relates to the aspect of brand awareness. It generally describes how often consumers can generate the brand (Keller, 2003). Brand awareness is a compound term that delivers an ability to recognize and recall the brand. Therefore, brand awareness can be identified by its depth and breadth (Keller, Aperia, & Georgson, 2012). The depth of brand awareness is the prospect that the brand element will come to mind. The breadth of brand awareness regards to the range of purchase where the brand elements come to mind. Farquhar (1989) described brand awareness as “how quickly a consumer can retrieve brand
elements stored in his/her memory”. According to his description, brand elements are the stimulus that can be evoked from memory. Researchers stated that brand recognition is vital when consumer decision has made at the point of purchase where they engage with the brand name, logo, and package (Keller, Aperia, & Georgson, 2012).

**Brand performance**

Brand performance is on the rational side of the pyramid where it defines the functional needs of the customers (Keller, 2003). Five important attributes commonly define brand performance:

1. In most of the cases, customers have beliefs about the levels at which the primary ingredients of product operate. In addition, there are supplementary features that allow for customization use (Keller, Aperia, & Georgson, 2012).
2. Brand performance can be viewed by customers from another point of view, such as reliability (stability of performance of over time), durability (product lifespan from an economic perspective), and serviceability (ease of servicing the product) (Keller, Aperia, & Georgson, 2012).
3. It may also associate in different ways, such as interactions with the brand. It includes service effectiveness (satisfaction of the customers on the service), service efficiency (refers to the responsiveness and speed of service delivery), and service empathy (the dimensions of trustiness and carefulness) (Keller, Aperia, & Georgson, 2012).
4. Not only the functional aspect but also aesthetic consideration is on the matter for the consumers. Therefore, style and design are the core sensory aspects (Keller, Aperia, & Georgson, 2012).
5. Pricing policy is the final component that can create an association in consumers’ mind (Keller, Aperia, & Georgson, 2012).

**Brand imagery**

Brand imagery focuses more on intangible aspects and psychological needs; therefore, it shows abstract thoughts of the people about the brand (Keller, Aperia, & Georgson, 2012). There are four categories in brand imagery, which can be highlighted:

1. User profiles (idealized brand user may be based on demographic factors and psychographic factors) (Keller, Aperia, & Georgson, 2012)
2. *Purchase and usage situations* (the purchase associations may be considered as a type of channel, specific chains, and ease of purchase) (Keller, Aperia, & Georgson, 2012)

3. *Personality and values* (five dimensions of brand personality have been identified in this case: sincerity, excitement, competence, sophistication, and ruggedness) (Keller, Aperia, & Georgson, 2012)

4. *History, heritage, and experiences* (certain past personal experiences and even related to the behavior of friends or family) (Keller, Aperia, & Georgson, 2012)

**Brand judgments**

The third step consists of *Judgments* and *Feelings*, which is the brand response from the potential customers about their feeling on the brand or product. This step allows the brand to understand its customers since the brand receives emotional responses and personal opinions (Keller, 2003).

Brand judgments deal with customer’s personal opinions and evaluations. In particular, it shows how customers conceive opinions from the performance and imagery associations. In order to create a strong brand, four types of brand judgments are considered. It starts with *quality* (refers to the perceived quality of the brand), *credibility* (the level that how the brand is seen as credible to the customers), *consideration* (the potential option that customers might use the brand), and *superiority* (a belief of the customers that the brand is unique than competitors) (Keller, Aperia, & Georgson, 2012).

**Brand feelings**

Brand feelings are the emotional responses of customers toward the brand marketing, advertisement, and product. Six brand-building feelings are stated below (Keller, Aperia, & Georgson, 2012):

1. *Warmth* (an extent where a brand can provide a warm, calm feeling to the customers)
2. *Fun* (feelings that are joyful, happy, and playful)
3. *Excitement* (consumers may feel alive or cool by evoked their excitement by the brand)
4. *Security* (comfortable and safety feeling from the brand)
5. **Social approval** (by using the brand consumers will feel favorable and positive about the reactions of others)

6. **Self-respect** (consumers may feel accomplished or fulfilled)

**Brand resonance**

Final brand building block for this step is *Brand resonance*, where it informs the relationship between the customer and brand. The loyalty of the customer can be seen in this step (Keller, 2003). Brand resonance is measured by its purchase repetition rate, intensity, and depth of the psychological connection. The four categories can mainly describe the brand resonance: *behavioral loyalty* (refers to the purchase frequency), *attitudinal attachment* (attitude or view of the brand as a passion), *sense of community* (stronger sense of community among loyal customers can provide a pleasant brand attitude), and *active engagement* (customers are ambassadors and evangelists of the brand that has a strong willingness to invest for the brand) (Keller, Aperia, & Georgson, 2012).

![Figure 5. Brand Resonance Model (Kotler & Keller, 2012, p. 249)](image)

**3.3.3 BrandZ model**

An additional brand-building model is BrandZ model, developed by marketing research consulting company, Millward Brown and WPP. The model generally begins with brand awareness by delivering buzz to the market and ends with brand loyalty where customers are already built an engagement with the brand. In order to build brand strength, the model requires going through five steps (presence, relevance, performance, advantage, and bonding) (Kotler & Keller, 2012). Figure 6 illustrates the Brand
Dynamics Pyramid with its levels, as level goes higher, the brand loyalty increases more vigorously. The objective of the pyramid is to get many consumers to the top level. In the consequence, a brand should implement and develop a program for the customers to move them into the top of the pyramid (Vasileva, 2016).

- **Presence** – The first step of the pyramid illustrates the awareness of the brand to the customers. Customers might have little knowledge about the brand. As the author described this level “active familiarity based on past trial, saliency, or knowledge of brand promise” (Kotler & Keller, 2012).
- **Relevance** – on the second level of the model, customers are already becoming aware of the brand, now they are facing with the question of whether the brand provides their need or not. Thus, the brand should focus on the customers’ need. On the other hand, customers must be offered by added value (Kotler & Keller, 2012).
- **Performance** – This step is the further association between the customers and the brand. The brand must deliver acceptable performance to the audience (Kotler & Keller, 2012).
- **Advantage** – Since the level is ascending closer to the top, it becomes harder. The brand must perform on beyond to make sure that the brand has an advantage over the other brands (Kotler & Keller, 2012).
- **Bonding** – Final step of the brand dynamics pyramid is bonding. This stage has already made an engagement with their consumers, in the business language; it is a loyal customer where their buying frequency to the brand has magnificently risen. On the other hand, this step is proof of the previous level. From this point of view, bonded consumers are the ones that have a strong relationship with the brand. As the author stated that, the challenge is to move up the people from the lower level (Kotler & Keller, 2012).
3.3.4 Brand Asset Valuator

Brand Asset Valuator (BAV) is a brand equity model developed by Young and Rubicam (Y&R) advertising agency. The BAV model affords comparative measures of brand equity across a variety of categories (Kotler & Keller, 2012). The model (Figure 7) consists of four primary components or pillars: differentiation, relevance, esteem, and knowledge.

- **Differentiation** analyzes the degree to what extent the brand differs from the other brands; therefore, it illustrates the uniqueness of the brand.
- **Relevance** measures the breadth and appropriateness of a brand’s appeal.
- **Esteem** determines the level of loyalty and quality, in other words how well respected is the brand.
- **Knowledge** is a measurement of brand awareness, whether the consumers have a knowledge of the brand.

*Brand strength* is a leading indicator that predicts the future value of the brand and consists of two pillars: Differentiation and Relevance. Integration of Esteem and Knowledge is a Brand stature, which concentrates on a present and past performance of the brand, in the other words it is a “report card” (Kotler & Keller, 2012, p. 245). A combination of these two indicators makes the power grid (Figure 8). The grid illustrates the level of the current brands among the provided components.
The brand equity models that we have clarified above offers a different strategic brand building opportunities for the firms. In particular, the models focused to
strengthen the value for both customers and to the firm. Customer-Based Brand Equity model by Keller (1993) and BrandZ model by Millward Brown specifically focused on the customer in order to create a strong engagement to understand consumer behavior. For instance, CBBE model sees that power of a brand lies in what customer have experienced (Keller, Aperia, & Georgson, 2012), while Aaker’s (1991) Brand Equity model creates value for both customer and the firm.

3.4 Effect of design principles and brand equity

Henderson and Cote (1998) demonstrated three design principles which are vital in eliciting positive response from customers: elaborateness (function of complexity, activity, and depth), naturalness (improves affect, representative and organic, and more meaningful), and harmony (balance and symmetry) (Stamatogiannakis, Luffarelli, & Yang, 2015).

Logos are the key part of a brand, and their role is to hold the consumers and increase the frequency of the purchase or service to the brand. The result of a successful logo design must be judged by the consumer’s response, whether the consumer responded positively to the brand or negatively. A study has confirmed that logo management is a vital concept, because of a logo people can conceive the behind story of the company (Pham, Pallares-Venegas, & Teich, 2012), in other words, logo enhances the recognition of the brand. Therefore, Henderson and Cote (1998) explored very detailed research on the evaluation of the logo design on consumer response based on analyze of the logo design characteristics. The dimensions of consumer response consist of correct recognition, false recognition, positive affect, and meaning (Henderson & Cote, 1998). Correct recognition provoked by highly natural, moderately harmonious logos with repeated elements, while false recognition arouses by highly harmonious logos at the middle level of parallel elements. Positive affect is aroused by moderately natural, moderately elaborate, and highly harmonious logos. Lastly, meaning promoted by highly natural and moderately proportional logos (Grohmann, 2008).

**Correct recognition** is the situation when the audience recognize from the past by seeing the logo (Kohli & Suri, 2002). Because virtual elements or images are a
strong enhancement to remember the moments from the past time. A study found that more representational logos are well recognized (Henderson & Cote, 1998) which is a driver for brand awareness. Therefore, Henderson and Cote (1998) identified that logos with moderate levels of harmony are better recognized.

**False recognition** appears when people believe they have seen a logo when they actually have not (Henderson & Cote, 1998). In other words, when the logo has a similar view with other brand’s logos, it provides a sense of knowing which false recognition is (Henderson, Cote, Leong, & Schmitt, 2003). Behind this concept, brands create a strategy to be recognized by the audience or to make it believe that they have seen the logo before. The characteristics of false recognition have a high level of harmony, which has a common design (Henderson & Cote, 1998).

**Positive affect** to the logo is crucial support both for designers and for brand; therefore it will show the success of the logo. Moreover, evaluations of the logo can affect the evaluation of the company at the same time (Henderson & Cote, 1998).

**Meaning** of the existing logo is also part of the enhancement of the recognition. Logos that have poor meaning does not seem to be recognized strongly comparing with the logos that have clear meanings. Clear meaning not only well recognized, but also assign a positive effect to the company (Henderson, Cote, Leong, & Schmitt, 2003). Researchers also defined this concept as stimulus codability. Because codable stimuli are perceived and remembered stronger than stimuli that do not arise rational meaning (Henderson, Cote, Leong, & Schmitt, 2003). Researchers have found that logos that have unfamiliar meaning does not associate well with people, while familiar meaning is evoked by naturalness and stated as an organic logo (Henderson & Cote, 1998).

Furthermore, researchers have emphasized three primary design principles that might affect brand equity: prototypicality, unity, and complexity (Stamatogiannakis, Luffarelli, & Yang, 2015). Prototypicality refers to the representation of the category. The term prototypicality has two types of use, the first one is related to design principle, which we are focusing in this paper, the second one is subjective perceptions (Veryzer, Jr. & Hutchinson, 1998). Veryzer and Hutchinson (1998) have found that higher levels of prototypicality and unity are provide well-affected responses to product design. Unity comprises any aspect of visual display, which make a link within its parts in a meaningful way (Veryzer, Jr. & Hutchinson, 1998). Another researcher has studied that
moderate complexity has higher chance to be chosen, because simplicity indicates less processing capacity and easier to encode in the consumers mind system (van Grinsven & Das, 2016). In the consequence, the design principles that have been mentioned above seem to raise product attitude, further brand equity (Stamatogiannakis, Luffarelli, & Yang, 2015).

**Logo design effect on brand recognition**

In order to build brand recognition brand logo design effort is crucial. Increasing brand recognition by simple logo design for the low-involvement products is a market success. Because consumers tend to recognize simple logo design faster in short-term, so designers create simple brand logos with less line and colors on it to attract people. The effect of simple logo design also efficient for the new small brands that entering to the market for the first time (van Grinsven & Das, 2016). The brand could easily achieve its brand recognition through its brand logo that has a high level of harmony but lightly perfect high symmetry (Kohli & Suri, 2002).

The effectiveness of complex logo is comparably higher than simple design. For instance, parent brands could place the complex designed brand logo on each of the sub-brands (van Grinsven & Das, 2016). In that case, consumers have a possibility to see the brand logo in variety of products of the sub-brands. Therefore, complex logo is efficient for the companies that are launching a long-lasting campaign. The repetitive exposure of the complex logo has an ability to position stronger (van Grinsven & Das, 2016).

**4 Research concept**

This chapter will present the concept of research work. The structure of this chapter will start formulating the main research question, then followed by the proposed research model that shows the relationship of a logo design and Customer-Based Brand Equity model. Furthermore, based on the theoretical framework we have developed several hypotheses that will examine the effectiveness of our research.
4.1 Research question

Brand design elements have an immense contribution to brand equity. Each of the elements creates boundless of value individually and conjointly. Therefore, choosing the piece of an element for the brand is not an easy task, this makes the proof why each of the element is valuable. In order to see the effect of the elements to the brand, the target audience must be indicated by having research. Otherwise, brand design elements (logo, package, color, typeface, etc.) could not meet the needs of the customers or it is impossible to implement efficient contribution.

In the previous chapter, we have indicated that logo design has a significant role in building strong brand equity. In the existing research papers, several researchers examined the logo design from the consumers’ perspective (Machado, de Carvalho, Torres, & Costa, 2015). Since the logo is a part of the brand, I intended to cover the effectiveness of logo design on brand equity, specifically focused on Keller’s (1993) brand equity model. Thus, the core research question of my thesis work has developed to understand:

“How does the logo design influences the brand equity?”

4.2 Research objective

The primary objective of the research work is to answer the research question by investigating the effect of logo design shapes specifically angular design and circular design on brand equity. The customer-based brand equity model by Keller (1993) has been utilized in order to indicate the logo shapes.

4.3 Research concept

The relationship between logo design and brand building blocks of Keller’s (1993) CBBE model has been illustrated in Figure 9. Logo shape has been specifically chosen from the design elements of a logo since it also includes proper meanings. In the theoretical framework, we have stated that the CBBE model consists of its six brand building blocks; based on this model we have built the concept to show the relationship of these components with logo shapes. Thus, the proposed model illustrates that the circular (angular) logo shape has an effect on each of the components of the CBBE model on the product category type (hedonic and functional).
4.4 Hypotheses

In order to inspect the research question more deeply, the following hypotheses are developed to test the effect of logo shapes on each brand equity components of the Keller’s (1993) CBBE model. Existing research papers provide support on these hypotheses (Jiang, Gorn, Galli, & Chattopadhyay, 2016).

Brand salience refers to the awareness of the brand (Keller, Aperia, & Georgson, 2012), so the logo is one of the supporting drivers for increasing awareness. Henderson & Cote (1998) demonstrated some design characteristics that have the ability to influence brand recognition, which is related to logo design. Therefore, as we have stated in the theoretical framework that circular and angular logos create an association
Research has found out that consumers make a decision when they encounter the product image (Jiang, Gorn, Galli, & Chattopadhyay, 2016). For instance, if the person sees the ad of a shoe that the product has a circular (angular) logo on it, the notion of softness (hardness) is likely to be triggered by the shape of the logo. In a consequence, the shoe seemed more comfortable for the consumer (Jiang, Gorn, Galli, & Chattopadhyay, 2016). Thus, we have formulated the following hypothesis:

**H1:** Circular (angular) shape of a logo has a positive effect on the perceived salience on hedonic (functional) product category.

Regarding the research findings of Jiang, Gorn, Galli, and Chattopadhyay (2016) the circular and angular logos also relate to the perceptions of durability and comfortableness. According to Keller, Aperia, and Georgson (2012), brand performance is determined by durability, which refers to the economic life of the product. Thus, the study of Jiang, Gorn, Galli, and Chattopadhyay (2016) demonstrated that an angular logo enhanced perceptions of durability. In the consequence, the hypothesis has developed in this way:

**H2:** Circular (angular) shape of a logo has a positive effect on the perceived performance on hedonic (functional) product category.

According to Keller, Aperia, and Georgson (2012), brand imagery refers to the experience, thoughts, and contact of the customers related to the brand. Therefore, customers who are already engaged with the brand has known the brand logo for a long time. In some situations, brands face a reformation of their brand elements, such as logo, slogan, package, etc. According to this statement, a study argued that consumer evaluation of the brand has changed, when the brand reforms or changes its logo from angular into rounded (Walsh, Page Winterich, & Mittal, 2010). Walsh, Page Winterich, & Mittal (2010) stated that if customers evaluate the logo negatively, then the brand associations and the brand image also lead to a negative attitude. We have developed the following hypothesis to study the effect of logo shape on the perceived imagery:

**H3:** Circular (angular) shape of a logo has a positive effect on the perceived imagery on hedonic (functional) product category.

The more circular logo, the more it is viewed as being harmonious and natural (Walsh, Page Winterich, & Mittal, 2010). Thus, it relates to how consumers see and
judge the logo shape, and then it will deliver direct evaluations to them. The following hypothesis will be tested:

**H4:** Circular (angular) shape of a logo has a positive effect on the perceived judgments on hedonic (functional) product category.

Keller, Aperia, & Georgson (2012) stated that the brand feelings are the emotional responses and reactions of a customer, the feelings can be positive, negative and even intense. Existing research has revealed that circular and angular shapes have been expressed different emotional-feelings for people (Jiang, Gorn, Galli, & Chattopadhyay, 2016). For instance, the more sharp angles represented the more harsh and cruel. Thus, in order to examine these angular and circular logo shapes, we have established the following hypothesis:

**H5:** Circular (angular) shape of a logo has a positive effect on the perceived feelings on hedonic (functional) product category.

Since the circular shape of a logo is associated with the friendliness (Walsh, Page Winterich, & Mittal, 2010) then there must be a connection between logo shape and brand. In the theoretical framework, we have stated that brand logo increases brand recognition, the reason behind is those visual elements are more concrete than verbal elements, yet the brand loyalty enhances in the same time (Pham, Pallares-Venegas, & Teich, 2012). According to the recent research study of Sääksjärvi, van den Hende, Mugge, & van Peursem (2015), affective commitment enhances people’s desire to be actively involved with the brand, in the other words sense of belonging to a brand increases. Thus, well-designed logo, which is effective to the consumer, has a possibility to influence brand loyalty since loyalty is the action of frequent engagement between two parties. Based on the studies, the following hypothesis will be tested:

**H6:** Circular (angular) shape of a logo has a positive effect on the perceived resonance on hedonic (functional) product category.
5 Methodology

This chapter presents the methodology that has used in the thesis work in order to test the hypotheses. We have been applied a quantitative research method in our study. The quantitative research has explained as “Explaining phenomena by collecting numerical data that are analyzed using mathematically based methods” (Muijs, 2004, p. 1). Thus, the quantitative method has generally intended to collect numerical data in order to analyze specific incidents. Two types of quantitative methods are non-experimental (Muijs, 2004) which we are primarily focusing on this study and experimental design.

The non-experimental method consists of survey research, historical research, observation, and analysis of existing data sets (Muijs, 2004). In this study, we are utilizing survey research, because it is not only convenient for descriptive studies but also shows the relationship between two variables.

5.1 Research population and sampling method

Research population is the audience who can share a relevant response to the questionnaire. In this context, the research population is the people who are the users of the product categories since they have already experienced with the products in a particular period. Therefore, those targeted people can provide relevant answers.

We use a sampling method to get the sample from the mass population. Therefore, there are two broad categories in sampling: probability-based sampling and non-probability sampling (Fricker, 2008). In our thesis work, we have used the snowball sampling method and convenience sampling method, which refer to a non-probability sampling. Malhotra & Birks (2007) stated that convenience sampling is can be used for generating the hypotheses and well suited for online survey. Therefore, the snowball sample technique is more targeted to the desired few individual audiences that can provide relevant responses to the questionnaire. After being involved, these respondents distribute the survey to the other population that also belongs to the target group (Malhotra & Birks, 2007). According to Fricker (2008), snowball sampling refers to initial respondents spreading the questions by generating additional respondents. Thus, the method has been preferred as an efficient technique in the research work.
5.2 Data collection

As people are getting more tech-savvy and the usage of internet has been increasing faster, the internet-based surveys are becoming more efficient. Thus, the research instrument that will be used in our study is the online survey. Collecting the data through an online survey has several advantages that make us easier to engage with audiences. According to Muijs (2004), several advantages and disadvantages have stated below:

- The online survey has an ability to cover and collect a large amount of data, in a short time period
- Relatively consumes low cost
- Does not require to set up an artificial experiment
- Convenient for canvassing respondent’s feelings about a specific problem

The disadvantages are:

- Researchers do not have an ability to take control of the environment
- It is challenging to get a precise result of processes and contextual differences through the questionnaire

Concerning all the above advantages that stated by Muijs (2004), an online survey was acceptable for the respondents, because of their flexibility of time. Thus, the internet allows us to collect the data from 204 respondents during the following period, from 29th of March 2019 to 2nd of April 2019.

The questionnaire was created on the online survey software Qualtrics in order to collect our data from targeted respondents. The platform allowed an A/B test function that we needed in our survey questionnaire. In order to check the availability A/B test on the online platform and reduce the errors or mistakes of the survey, three person has filled the survey questionnaire before launching the final version. The questions that asked in the survey was in English.
5.3 Designing survey questionnaires

In this research work, we are having two different product categories for hedonic and functional products, which we are aiming to analyze the effect of the circular and angular logo shapes. The hedonic product category is perfume and the functional product category is sneakers. In order to make it clear understanding, the hedonic product refers to a feeling of pleasure, while the functional product has related to more useful rather than drawing attention.

In this survey questionnaire, we have created two logos, angular shaped and circular shaped (Figure 10) for two different product categories in order to see the logo shape effects on brand equity components. The hedonic product category is perfume (Figure 11) where it relates to the feeling, whereas sneakers (Figure 12) have chosen for the functional product category.

![Angular logo and circular logo](source: Own logo)

**Figure 10. Angular logo and circular logo**

*Source: Own logo*

![Hedonic product category](source: http://www.globe-vogueur.ca/)

**Figure 11. Hedonic product category**

*Source: http://www.globe-vogueur.ca/*

![Functional product category](source: https://smartymockups.com/)

**Figure 12. Functional product category**

*Source: https://smartymockups.com/*

In our survey questionnaire, we have used both the unstructured and structured questions. The survey was divided into three main parts. The first part is consists of two
warm-up questions and we have used the multi-item scale in order to get the opinion of the respondents in different aspects by using five scales (1 - totally unimportant, 2 - unimportant, 3 - neither important nor unimportant, 4 - important, and 5 - totally important).

In the second part of the questionnaire, we have applied and formulated A/B testing in order to compare the product categories. In test A, we showed perfume with angular logo and sneakers with a circular logo, whilst in the B testing, perfume with a circular logo and sneakers with angular logo have applied. Each respondent will only see the A testing or B testing when they start filling the survey questionnaire. The multi-item scale has been applied in this part where respondents can choose their desired feelings towards the presented statements based on the photos of hedonic and functional products. Sixteen questions are asking the effect of logo design for each product, based on components of the CBBE model. Questions from 1-3 are adopted from Aziz & Yasin (2010) and were asked about the consumers’ recognition and awareness of the brand, based on the brand salience of the CBBE model. The next (questions 4-7) questions were asked about the feelings of consumers on Performance and Imagery. Questions from 8-10 are related to Judgments, and the following questions (questions 11-13) are based on the component of Feelings. Therefore, the questions 4-10 were adopted from Yoo & Donthu (2001) and Aziz & Yasin (2010). Final three questions (questions 14-16) are asked about consumers’ engagement with the brand, which is the brand building block Resonance.

In the final part of the survey, the characteristics of the respondents have been asked by six questions. According to Muijs (2004), respondents are more satisfied answering this kind of questions at the end of the survey, not in the beginning. The reason behind is not to make respondents annoyed from the beginning of the questionnaire. This part includes multiple choice and open-ended questions where respondents can express their thoughts spontaneously and freely.

5.4 Data analysis

In order to analyze and generate the precise result, we utilized the Statistical Package for Social Sciences (SPSS) version 25, where it provides comprehensive functions. All the data that collected through the online platform Qualtrics have imported to the SPSS. As we have mentioned before that we have used A/B test in order to have two groups. In the SPSS, we coded the respondents who are filled “A” test as
group 1, and respondents who are filled “B” test as group 2. A new variable was created with two groups that include both A/B test respondents. Further, we used Compute variables function in the SPSS to merge the data of A and B test, in order to get the result from the Independent Sample T-Test function. Each question that asked from respondents on A/B test has been converted and merged into new variables. Lastly, Independent Sample T-test function has been used, where it allows us to use the comparison of means of two independent groups.

6 Research findings

The aim of the chapter is to provide a precise explanation of the analysis that we have conducted on SPSS and the findings of the research work will be presented as well. Before we detail the analysis, the structure of the sample will be presented in order to provide a clear understanding. After the structure of the sample, the main result of the analysis will be shown followed by the examination of the hypotheses that we have mentioned in the earlier chapter.

6.1 Structure of the sample

The sample size of the research work consisted of 204 respondents. Regarding to gender, there are 128 female respondents, which is holding the majority of the sample, whilst the male respondents account at 37% (76 respondents) of the whole survey, where we can see from the Figure 13.

![Distribution of the sample based on gender (SPSS output)](image)

Figure 13. Distribution of the sample based on gender (SPSS output)
The age distribution of the sample is illustrated in Figure 14. In the survey, we have coded and divided the ages of the sample into five groups: below 24, 25-34, 35-44, 45-54, and over 55. As you can see from the pie chart below, it illustrates that the largest group of respondents were people aged below 24, which is 50% (102 respondents) of the whole sample. Since the research population consists of users who have some level of experience with the two product categories, so the result shows two interesting facts: first Generation Z (people aged below 24) is social based people and they commonly use both products (sneakers and perfume).

The following group is the second group (25-34), accounts at 43.6% (89 respondents) from the whole sample. In other words, they are Generation Y, where they also have a strong utilization of sneakers and perfumes. Interestingly, the other three groups are not really resulted higher. In this case, we can state that the snowball sampling method resulted effective. Furthermore, the third group (35-44) has resulted as 4% (8 respondents) of the total respondents. The last two group of respondents that accounts at only 1% of the whole sample, which is group 4 (45-54) where they consisted of 2 respondents and group 5 (over 55) that includes 3 respondents.

![Distribution of the sample based on age (N=204)](image)

*Figure 14. Distribution of the sample based on age (SPSS output)*

When it comes to nationality (Figure 15), respondents vary largely in their nationality. There are 39 different nationalities in our survey, which shows a broad result. In order to minimize diversity, we have coded it into the continents. The majority of the sample are Asians that accounts for 65.7% (134 respondents) of the whole
respondents followed by Europeans with 24% (49 respondents). Precisely, in the survey, there are 111 Mongolian people participated, the highest number of nationality in this survey questionnaire. The third largest group is the Middle East, which is 4.4% (9 respondents) from the total sample. From this point of view, the result indicates that the analysis has roughly based on Asian and European backgrounds. We could not forget to mention the one respondent from Africa, specifically from Burundi.

Next category is the place of living of the survey respondents, which also shows a broad and interesting result. In Figure 16, we can see that majority of the respondents are from Europe as their place of living, specifically 89 respondents are from Hungary. As the researcher placed in Budapest, the initial respondents of the survey questionnaire were in Budapest, Hungary. The second largest group of respondents are from Asia, where respondents in Mongolia accounts at 34 out of 52, which means remaining 18 are from different Asian countries. The following classification is South and North America, which accounts at 15, whilst there was only one respondent from each country: Australia, Burundi, and Georgia. Finally, one respondent did not answer the question, indicated by N/A.

Figure 15. Distribution of the sample based on nationality (SPSS output)
Furthermore, Figure 17 illustrates the educational background of our respondents. The largest group of respondents are achieved an undergraduate degree that accounts 46% (93 respondents) from total sample, which shows considerably high number; second highest number of respondents are postgraduates, which is 33% (67 respondents) of the whole population. Six doctorates account 3% from the mass. The survey result shows that 82% are achieved a higher degree from the total respondents. Followed by 15% (31 respondents) of high school graduates and the remaining 3% (7 respondents) is the others.

Figure 16. Distribution of the sample based on place of living (SPSS output)

Figure 17. Distribution of the sample based on level of education (SPSS output)
We saw an interesting result from the final demographic, which is the occupation of the respondents. The result almost has coded as a two group where the majority of the sample recorded as a student, accounts for 116 (56.9%) from the total respondents and the others, which includes a different variety of occupations.

6.2 Respondents’ attitude toward brand aspect

In the survey, we asked from respondents about their attitude of brand aspect when they make a decision on two different product categories: hedonic and functional. Six statements examined brand aspects of the consumer’s attitude on the product, which are the brand name, price, quality, logo, brand slogan, and package. The following two sub-chapters will present it in detail.

6.2.1 Functional product category – Sneakers

In order to investigate respondents’ attitude on brand aspects when making a decision on functional products (in this case sneakers), respondents were asked the following question: *Please indicate to what extent do you consider the aspects of a brand, when you choose sneakers (boots)*. As you can see from Table 1, respondents strongly agree that the quality of the sneakers is most important; the mean score resulted as 4.41, which is the highest score than the other aspects. The second important brand aspect for the respondents is price, accounts at 4.08. In case of choosing sneakers, respondents tend to consider the price over the brand name, which is an interesting result. The mean score of the logo and brand name recorded slightly higher than the average, which resulted at 3.42 (Logo) and 3.71 (Brand name). Finally, the result illustrates that for the respondents of our survey Brand slogan (mean score = 2.58) and Package (mean score = 2.77) does not really affect choosing sneakers. As respondents view, the brand slogan is the lowest aspect for the sneakers, because it does not give any advantage for having a functional product.
As we know that logo design is an effective factor for choosing products. However, in terms of choosing sneakers, logo design has placed in the fourth most important factor for the respondents’ choice.

### 6.2.2 Hedonic product category – Perfume

This part shows the result of the second question, which is related to the hedonic product category (in our case of perfume). The following question has asked from the respondents in order to investigate their attitude on brand aspects: *Please indicate to what extent do you consider the aspects of a brand, when you choose a perfume.* Table 2 illustrates the mean scores of the brand aspects. Respondents indicated that the quality of the product is substantially important when choosing a perfume, which shows the highest mean score of 4.38 among the brand aspects. This result seemed considerably realistic since the quality of the perfume refers to the smell. Furthermore, the price has recorded as the second important factor with the mean score of 3.91; the result proves that people consider more about price rather than brand name. The next following brand aspect is a Brand name where we can see the mean score 3.65 from Table 2, which is slightly higher than Package (mean score = 3.43). Furthermore, the logo in the perfume is not highly effective for the respondents, since they indicated “neither important nor unimportant” to the question in the survey and the mean score resulted in 3.05. The least important factor is recorded as Brand slogan where indicated as 2.61, where respondents do not really care about the slogan when choosing a perfume.

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<td>Package</td>
<td>204</td>
<td>1</td>
<td>5</td>
<td>2.77</td>
<td>1.178</td>
</tr>
<tr>
<td>Valid N (listwise)</td>
<td>204</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Table 1. Brand aspects when choosing sneaker (SPSS output)*

As we know that logo design is an effective factor for choosing products. However, in terms of choosing sneakers, logo design has placed in the fourth most important factor for the respondents’ choice.

### 6.2.2 Hedonic product category – Perfume

This part shows the result of the second question, which is related to the hedonic product category (in our case of perfume). The following question has asked from the respondents in order to investigate their attitude on brand aspects: *Please indicate to what extent do you consider the aspects of a brand, when you choose a perfume.* Table 2 illustrates the mean scores of the brand aspects. Respondents indicated that the quality of the product is substantially important when choosing a perfume, which shows the highest mean score of 4.38 among the brand aspects. This result seemed considerably realistic since the quality of the perfume refers to the smell. Furthermore, the price has recorded as the second important factor with the mean score of 3.91; the result proves that people consider more about price rather than brand name. The next following brand aspect is a Brand name where we can see the mean score 3.65 from Table 2, which is slightly higher than Package (mean score = 3.43). Furthermore, the logo in the perfume is not highly effective for the respondents, since they indicated “neither important nor unimportant” to the question in the survey and the mean score resulted in 3.05. The least important factor is recorded as Brand slogan where indicated as 2.61, where respondents do not really care about the slogan when choosing a perfume.

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Logo</td>
<td>204</td>
<td>1</td>
<td>5</td>
<td>3.42</td>
<td>1.096</td>
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<td>Brand name</td>
<td>204</td>
<td>1</td>
<td>5</td>
<td>3.71</td>
<td>.987</td>
</tr>
<tr>
<td>Price</td>
<td>204</td>
<td>1</td>
<td>5</td>
<td>4.08</td>
<td>.909</td>
</tr>
<tr>
<td>Quality</td>
<td>204</td>
<td>1</td>
<td>5</td>
<td>4.41</td>
<td>.880</td>
</tr>
<tr>
<td>Brand slogan</td>
<td>204</td>
<td>1</td>
<td>5</td>
<td>2.58</td>
<td>1.122</td>
</tr>
<tr>
<td>Package</td>
<td>204</td>
<td>1</td>
<td>5</td>
<td>2.77</td>
<td>1.178</td>
</tr>
<tr>
<td>Valid N (listwise)</td>
<td>204</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Table 1. Brand aspects when choosing sneaker (SPSS output)*

As we know that logo design is an effective factor for choosing products. However, in terms of choosing sneakers, logo design has placed in the fourth most important factor for the respondents’ choice.

### 6.2.2 Hedonic product category – Perfume

This part shows the result of the second question, which is related to the hedonic product category (in our case of perfume). The following question has asked from the respondents in order to investigate their attitude on brand aspects: *Please indicate to what extent do you consider the aspects of a brand, when you choose a perfume.* Table 2 illustrates the mean scores of the brand aspects. Respondents indicated that the quality of the product is substantially important when choosing a perfume, which shows the highest mean score of 4.38 among the brand aspects. This result seemed considerably realistic since the quality of the perfume refers to the smell. Furthermore, the price has recorded as the second important factor with the mean score of 3.91; the result proves that people consider more about price rather than brand name. The next following brand aspect is a Brand name where we can see the mean score 3.65 from Table 2, which is slightly higher than Package (mean score = 3.43). Furthermore, the logo in the perfume is not highly effective for the respondents, since they indicated “neither important nor unimportant” to the question in the survey and the mean score resulted in 3.05. The least important factor is recorded as Brand slogan where indicated as 2.61, where respondents do not really care about the slogan when choosing a perfume.
Table 2. Brand aspects when choosing perfume

(SPSS output)

6.3 Effect of logo shape on the CBBE components

6.3.1 Angular shape of a logo

Brand Salience

Table 3 illustrates the difference between two product categories in case of angular logo shape. In terms of the brand salience, the first mean score of the first statement (I can recognize the brand among the other competing brands) of hedonic product with angular logo (mean score = 2.97) is higher than the functional product with angular logo (mean score = 2.49). For some reason, respondents can recognize hedonic product with the angular logo more than the functional product with angular logo.

We can see another difference between two product categories in case of second statement (Logo characteristics of the product come to my mind quickly), where the hedonic product with angular logo (mean score = 2.89) is considerably preferable than the functional product with angular logo (mean score = 2.63) for the respondents. Considering the mean score 2.87, respondents tend to recall more quickly the angular logo on the hedonic product than functional product, where we have asked the following question: I can quickly recall the logo of the brand. Finally, utilizing the t-test, we found out a significant difference between two groups in case of the first statement, however, the other two statements resulted non-significant.
### Independent Sample T-test

<table>
<thead>
<tr>
<th>Statements</th>
<th>Product category</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Sig. level</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 I can recognize the brand among the other competing brands</td>
<td>Hedonic</td>
<td>106</td>
<td>2.97</td>
<td>1.037</td>
<td>.001</td>
</tr>
<tr>
<td></td>
<td>Functional</td>
<td>98</td>
<td>2.49</td>
<td>1.027</td>
<td></td>
</tr>
<tr>
<td>2 Logo characteristics of the product come to my mind quickly</td>
<td>Hedonic</td>
<td>106</td>
<td>2.89</td>
<td>1.210</td>
<td>.113</td>
</tr>
<tr>
<td></td>
<td>Functional</td>
<td>98</td>
<td>2.63</td>
<td>1.152</td>
<td></td>
</tr>
<tr>
<td>3 I can quickly recall the logo of the brand</td>
<td>Hedonic</td>
<td>106</td>
<td>2.87</td>
<td>1.160</td>
<td>.349</td>
</tr>
<tr>
<td></td>
<td>Functional</td>
<td>98</td>
<td>2.72</td>
<td>1.164</td>
<td></td>
</tr>
</tbody>
</table>

*Table 3. Results of the t-test on the effect of angular logo on brand salience (SPSS output)*

---

**Brand Performance and Imagery**

Table 4 presents another important question regarding the brand performance and imagery. From the fourth question *(This perfume/sneakers is more durable than other brands)* we can see a slight difference in mean scores between two product categories. Hedonic product with angular logo resulted 2.75, whilst functional product shows 2.89 of mean score. Thus, angular logo on functional product seemed slightly durable than the hedonic product.

In case of the fifth question *(I feel good about the brand aesthetic)*, respondents felt neither good nor bad about the aesthetic of the angular logo on the functional product (mean score = 3.00), while hedonic product (mean score = 2.83) seemed slightly unimportant.

Next statement *(Compared to other brands, the brand has superior quality)* shows exactly the same result with the means score of 2.8 for both product categories with angular logo. Which refers to both independent samples reacted very much likely to the statement.

The last statement *(For me the brand is caring)* of Table 4 shows that the hedonic product with angular logo (mean score = 2.73) resulted slightly less caring,
comparing with functional product with angular logo (mean score = 2.87). To sum up the three statements above, the significance resulted non-significant, which means there is less difference between the two groups for each statement.

<table>
<thead>
<tr>
<th>Statements</th>
<th>Product category</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Sig. level</th>
</tr>
</thead>
<tbody>
<tr>
<td>4 This perfume/sneakers is more durable than other brands</td>
<td>Hedonic</td>
<td>106</td>
<td>2.75</td>
<td>.934</td>
<td>.362</td>
</tr>
<tr>
<td></td>
<td>Functional</td>
<td>98</td>
<td>2.89</td>
<td>.987</td>
<td></td>
</tr>
<tr>
<td>5 I feel good about the brand aesthetic</td>
<td>Hedonic</td>
<td>106</td>
<td>2.83</td>
<td>1.009</td>
<td>.214</td>
</tr>
<tr>
<td></td>
<td>Functional</td>
<td>98</td>
<td>3.00</td>
<td>.930</td>
<td></td>
</tr>
<tr>
<td>6 Compared to other brands, the brand has superior quality</td>
<td>Hedonic</td>
<td>106</td>
<td>2.81</td>
<td>.863</td>
<td>.969</td>
</tr>
<tr>
<td></td>
<td>Functional</td>
<td>98</td>
<td>2.82</td>
<td>.998</td>
<td></td>
</tr>
<tr>
<td>7 For me the brand is caring</td>
<td>Hedonic</td>
<td>106</td>
<td>2.73</td>
<td>.900</td>
<td>.283</td>
</tr>
<tr>
<td></td>
<td>Functional</td>
<td>98</td>
<td>2.87</td>
<td>.970</td>
<td></td>
</tr>
</tbody>
</table>

Table 4. Results of the t-test on the effect of angular logo on brand performance and imagery

(SPSS output)

Brand Feelings

The result of the statements of the brand feelings are presented in Table 5. In the case of the eighth statement (The brand is innovative), the mean score of hedonic product with angular logo is 2.74 where it has resulted in an almost similar to functional product. Respondents indicated that there is not much difference between these two product categories with angular logo.

In the next statement (The quality of the brand is consistent), respondents did not react differently to the product categories based on angular logo shape. The mean scores of hedonic and functional product categories are equal by 3.0.
The final statement \((My\ overall\ opinion\ of\ the\ brand\ is\ good)\) of the table shows that minor difference has been recorded between two product categories. People have a slight good opinion for the angular logo on the hedonic product (mean score = 3.12) than the functional product (mean score = 3.06). Thus, using the t-test for independent samples, the results of the statements showed non-significant.

<table>
<thead>
<tr>
<th>Statements</th>
<th>Product category</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Sig. level</th>
</tr>
</thead>
<tbody>
<tr>
<td>8 The brand is innovative</td>
<td>Hedonic</td>
<td>106</td>
<td>2.74</td>
<td>.94920</td>
<td>.719</td>
</tr>
<tr>
<td></td>
<td>Functional</td>
<td>98</td>
<td>2.79</td>
<td>1.02796</td>
<td></td>
</tr>
<tr>
<td>9 The quality of the brand is consistent</td>
<td>Hedonic</td>
<td>106</td>
<td>3.01</td>
<td>.86735</td>
<td>.514</td>
</tr>
<tr>
<td></td>
<td>Functional</td>
<td>98</td>
<td>3.09</td>
<td>.93154</td>
<td></td>
</tr>
<tr>
<td>10 My overall opinion of the brand is good</td>
<td>Hedonic</td>
<td>106</td>
<td>3.12</td>
<td>.84744</td>
<td>.603</td>
</tr>
<tr>
<td></td>
<td>Functional</td>
<td>98</td>
<td>3.06</td>
<td>.83501</td>
<td></td>
</tr>
</tbody>
</table>

Table 5. Results of the t-test on the effect of angular logo on brand feelings

\((SPSS\ output)\)

**Brand Judgments**

Table 6 exhibits the three statements of brand judgments where statement 11 re-coded from the question of “The brand gives me a feeling of excitement”, statement 12 re-coded from “The brand gives me a feeling of calm and peacefulness” and lastly statement 13 re-coded from the question of “The brand provides me a feeling of safety”. Brand judgment is mainly focused on the evaluations and opinion of the customers toward the brand (Aziz & Yasin, 2010).

In the third statement of Table 6, the mean score 2.98 of functional product with angular logo is slightly higher than the hedonic product, which is correlated with our hypotheses. As we can see from the following statement, a minor mean score difference
has resulted between hedonic (mean score = 2.86) and functional (mean score = 2.89) products that have an angular logo. The result shows that the angular logo on both products does not provide a calm and peacefulness to the respondents. Lastly, another same result has occurred in the last statement of Table 6, where respondents answered “Neither important nor unimportant”. The t-test results indicated that the statements resulted non-significant between two groups.

<table>
<thead>
<tr>
<th>Statements</th>
<th>Product category</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Sig. level</th>
</tr>
</thead>
<tbody>
<tr>
<td>11 The brand gives me a feeling of excitement</td>
<td>Hedonic</td>
<td>106</td>
<td>2.81</td>
<td>1.015</td>
<td>.258</td>
</tr>
<tr>
<td></td>
<td>Functional</td>
<td>98</td>
<td>2.98</td>
<td>1.102</td>
<td></td>
</tr>
<tr>
<td>12 The brand gives me a feeling of calm and peacefulness</td>
<td>Hedonic</td>
<td>106</td>
<td>2.86</td>
<td>.980</td>
<td>.776</td>
</tr>
<tr>
<td></td>
<td>Functional</td>
<td>98</td>
<td>2.89</td>
<td>.999</td>
<td></td>
</tr>
<tr>
<td>13 The brand provides me a feeling of safety</td>
<td>Hedonic</td>
<td>106</td>
<td>2.87</td>
<td>1.051</td>
<td>.941</td>
</tr>
<tr>
<td></td>
<td>Functional</td>
<td>98</td>
<td>2.86</td>
<td>1.025</td>
<td></td>
</tr>
</tbody>
</table>

*Table 6. Results of the t-test on the effect of angular logo on brand judgments*  
*(SPSS output)*

**Brand Resonance**

Table 7 shows the last three statements of the final brand equity component, brand resonance. The statements are indicating the extent of the relationship between the customers and the brand, where they can feel that they are “in sync” (Aziz & Yasin, 2010). From the mean score 2.81 of the first statement *(This brand would be my preferred choice)*, we can state that it resulted against the hypotheses which are the hedonic product with angular logo has indicated higher than the functional product with angular logo (mean score = 2.77). Therefore, people would not prefer angular logo on the functional product.
The following statement (*I feel this brand is the only brand that I need*) shows that there is even no exact difference between two groups and the overall sample does not fully agree with the statement, where the mean score resulted at 2.33.

The highest mean score of the final statement (*I would recommend this brand to others*) is recorded as 2.81, which is slightly above from the mean score 2.74 of functional product with angular logo. Concluding this section, t-test provided us non-significant result between the two groups on each statement.

<table>
<thead>
<tr>
<th>Statements</th>
<th>Product category</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Sig. level</th>
</tr>
</thead>
<tbody>
<tr>
<td>This brand would be my preferred choice</td>
<td>Hedonic</td>
<td>106</td>
<td>2.81</td>
<td>1.052</td>
<td>.750</td>
</tr>
<tr>
<td></td>
<td>Functional</td>
<td>98</td>
<td>2.77</td>
<td>1.003</td>
<td></td>
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<tr>
<td>I feel this brand is the only brand that I need</td>
<td>Hedonic</td>
<td>106</td>
<td>2.33</td>
<td>1.110</td>
<td>.966</td>
</tr>
<tr>
<td></td>
<td>Functional</td>
<td>98</td>
<td>2.34</td>
<td>1.045</td>
<td></td>
</tr>
<tr>
<td>I would recommend this brand to others</td>
<td>Hedonic</td>
<td>106</td>
<td>2.81</td>
<td>1.034</td>
<td>.648</td>
</tr>
<tr>
<td></td>
<td>Functional</td>
<td>98</td>
<td>2.74</td>
<td>1.039</td>
<td></td>
</tr>
</tbody>
</table>

*Table 7. Results of the t-test on the effect of angular logo on brand resonance (SPSS output)*

**6.3.2 Circular shape of a logo**

**Brand salience**

The three statements in Table 8 of brand salience overall have similar results. In order to make it clear, the first statement that asked from the respondents was "*I can recognize the brand among the other competing brands*". The circular logo on the functional product (mean score = 2.72) has slightly more recognized than the hedonic product with circular logo (mean score = 2.66), which is against our hypotheses. The result of the following statement (*Logo characteristics of the product come to my mind*
quickly) illustrates quite similar results by the mean score for hedonic product 2.78 and for functional product 2.76. This result showed that the overall respondents do not really agree with the statement. The next question that we asked from the respondents was “I can quickly recall the logo of the brand”. In this case, it is also important to mention here that this brand does not exist on the market, so, respondents saw the logo for the first time in this survey questionnaire. As we can see from Table 8, the result of the analysis has indicated. The functional product with a circular logo resulted a bit higher with the mean score of 2.8 than the hedonic product with circular logo (mean score = 2.71) on it. Overall, the t-test of the two independent variables showed that the statements indicated in the table resulted non-significant between two groups.

<table>
<thead>
<tr>
<th>Statements</th>
<th>Product category</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Sig. level</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 I can recognize the brand among the other competing brands</td>
<td>Hedonic</td>
<td>106</td>
<td>2.72</td>
<td>1.128</td>
<td>.737</td>
</tr>
<tr>
<td></td>
<td>Functional</td>
<td>98</td>
<td>2.66</td>
<td>1.157</td>
<td></td>
</tr>
<tr>
<td>2 Logo characteristics of the product come to my mind quickly</td>
<td>Hedonic</td>
<td>106</td>
<td>2.76</td>
<td>1.126</td>
<td>.943</td>
</tr>
<tr>
<td></td>
<td>Functional</td>
<td>98</td>
<td>2.78</td>
<td>1.135</td>
<td></td>
</tr>
<tr>
<td>3 I can quickly recall the logo of the brand</td>
<td>Hedonic</td>
<td>106</td>
<td>2.80</td>
<td>1.214</td>
<td>.595</td>
</tr>
<tr>
<td></td>
<td>Functional</td>
<td>98</td>
<td>2.71</td>
<td>1.131</td>
<td></td>
</tr>
</tbody>
</table>

Table 8. Results of the t-test on the effect of circular logo on brand salience

( SPSS output)

Brand performance and imagery

The first statement (This perfume/sneakers is more durable than other brands) of the Table 9 shows that functional product with circular logo (mean score = 2.92) is higher than the hedonic product where the mean score resulted as 2.67. For some reason, the functional product seemed a bit more durable than the hedonic products for the respondents.
In the above statement, the significance score recorded at 0.74. In the following statement (*I feel good about the brand aesthetic*), hedonic product and functional product with circular logo show the similar result (mean score =2.8 for both samples) from both independent samples, which tells us the aesthetic was not felt well for the respondents.

In order to get the result for the brand imagery, we have asked the following question “*Compared to other brands, the brand has superior quality*”. The mean score 2.83 resulted for the functional product with the circular logo, whilst hedonic product with circular logo’s mean score recorded at 2.81, where we can see an almost the same mean score for both samples. The last question (*For me the brand is caring*) of Table 9 illustrated the following results. Functional product with circular logo (mean score = 2.84) was slightly lower than the hedonic product with circular logo (mean score = 2.9).

The overall result of the circular logo on hedonic and functional product category in case of brand performance and imagery resulted non-significantly between the two independent groups, which analyzed by t-test.

<table>
<thead>
<tr>
<th>Statements</th>
<th>Product category</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Sig. level</th>
</tr>
</thead>
<tbody>
<tr>
<td>4. This perfume/sneakers is more durable than other brands</td>
<td>Hedonic</td>
<td>106</td>
<td>2.92</td>
<td>1.011</td>
<td>.074</td>
</tr>
<tr>
<td></td>
<td>Functional</td>
<td>98</td>
<td>2.67</td>
<td>.982</td>
<td></td>
</tr>
<tr>
<td>5. I feel good about the brand aesthetic</td>
<td>Hedonic</td>
<td>106</td>
<td>2.85</td>
<td>1.076</td>
<td>.780</td>
</tr>
<tr>
<td></td>
<td>Functional</td>
<td>98</td>
<td>2.81</td>
<td>1.118</td>
<td></td>
</tr>
<tr>
<td>6. Compared to other brands, the brand has superior quality</td>
<td>Hedonic</td>
<td>106</td>
<td>2.83</td>
<td>1.028</td>
<td>.872</td>
</tr>
<tr>
<td></td>
<td>Functional</td>
<td>98</td>
<td>2.81</td>
<td>1.100</td>
<td></td>
</tr>
<tr>
<td>7. For me the brand is caring</td>
<td>Hedonic</td>
<td>106</td>
<td>2.84</td>
<td>.927</td>
<td>.671</td>
</tr>
<tr>
<td></td>
<td>Functional</td>
<td>98</td>
<td>2.90</td>
<td>1.030</td>
<td></td>
</tr>
</tbody>
</table>

*Table 9. Results of the t-test on the effect of circular logo on brand performance and imagery (SPSS output)*

44
Brand feelings

In terms of brand feeling, the statements in Table 10 illustrates considerably distinct results from the other brand aspects. In the first question (*The brand is innovative*), the hedonic product with circular logo (mean score = 2.86) resulted considerably higher than the functional product with circular logo shape (mean score = 2.74). To some extent, people considered the circular logo on the functional product (in this case sneaker) as less innovative.

As we can see from the Table 10, the mean score of the statement (*The quality of the brand is consistent*) shows slightly distinct numbers, where the circular logo on the functional product is 3.14 and the hedonic product is 3.02. In this case, we can explain that respondents of the survey questionnaire rated functional product with the circular logo shape as consistent with the quality compared with the hedonic product.

The remaining statement (*My overall opinion of the brand is good*) of Table 10, the minor difference between two mean scores indicates considerably huge meaning. For some reason, people have a good opinion on the circular logo on a functional product where the mean score resulted as 3.16, whilst hedonic product with circular logo recorded as 3.03. Therefore, by analyzing the collected data, the result of the three statements from the t-test resulted non-significant difference between two independent groups.

<table>
<thead>
<tr>
<th>Independent Sample T-test</th>
</tr>
</thead>
<tbody>
<tr>
<td>Statements</td>
</tr>
<tr>
<td>8 The brand is innovative</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>9 The quality of the brand is consistent</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>10 My overall opinion of the brand is good</td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>

*Table 10. Results of the t-test on the effect of circular logo on brand feelings (SPSS output)*
Brand judgments

Regarding to the brand judgments, the following statements asked from the respondents in order to analyze the t-test for independent samples. Overall, the mean scores of the three statements resulted slightly lower than the average score. To make it clear, let us focus on each statement by comparing the mean scores of two sample groups.

In the first statement *(The brand gives me a feeling of excitement)* of Table 11, functional product with circular logo (mean score = 2.76) rated lower than the hedonic product with circular logo (mean score = 2.83) which means people felt less excitement on the functional product. The following question *(The brand gives me a feeling of calm and peacefulness)* shows us a distinct rate from two mean scores of different product categories. The mean score 2.93 of functional product with a circular logo resulted comparably higher than the hedonic product category (mean score = 2.71). According to the results, respondents tend to feel less calm and peacefulness from both product categories with a circular logo on it. The last statement *(The brand provides me a feeling of safety)* of Table 11 shows us roughly same mean scores, where circular logo with functional product resulted at 2.76, whilst hedonic product recorded at 2.74. Thus, it is hard to mention that circular logo provides a feeling of safety. Therefore, utilizing the t-test, we have found that less significance from the result, which is almost no difference between two independent groups.

<table>
<thead>
<tr>
<th>Statements</th>
<th>Product category</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Sig. level</th>
</tr>
</thead>
<tbody>
<tr>
<td>11 The brand gives me a feeling of excitement</td>
<td>Hedonic</td>
<td>106</td>
<td>2.76</td>
<td>1.029</td>
<td>.682</td>
</tr>
<tr>
<td></td>
<td>Functional</td>
<td>98</td>
<td>2.83</td>
<td>1.140</td>
<td>.135</td>
</tr>
<tr>
<td>12 The brand gives me a feeling of calm and peacefulness</td>
<td>Hedonic</td>
<td>106</td>
<td>2.93</td>
<td>.988</td>
<td>.897</td>
</tr>
<tr>
<td></td>
<td>Functional</td>
<td>98</td>
<td>2.71</td>
<td>1.103</td>
<td>.103</td>
</tr>
<tr>
<td>13 The brand provides me a feeling of safety</td>
<td>Hedonic</td>
<td>106</td>
<td>2.76</td>
<td>1.010</td>
<td>.897</td>
</tr>
<tr>
<td></td>
<td>Functional</td>
<td>98</td>
<td>2.74</td>
<td>1.106</td>
<td>.106</td>
</tr>
</tbody>
</table>

*Table 11. Results of the t-test on the effect of circular logo on brand judgments (SPSS output)*
**Brand resonance**

In order to find out how people perceive about the circular logo on hedonic and functional product categories in terms of brand resonance, the survey respondents were asked to fill out the answer for the following three statements.

14 - *This brand would be my preferred choice*

15 - *I feel this brand is the only brand that I need*

16 - *I would recommend this brand to others*

The mean scores in the first statement of the Table 12 are nearly similar, which indicates no statistical difference for circular logo shape on both hedonic (mean score = 2.73) and functional (mean score = 2.75) product categories. The respondents from the two groups have not any distinct feelings toward the circular logo on the product categories. In the following statement (C15), as we can see the functional product with circular logo (mean score = 2.22) is less resulted compared with the hedonic product (mean score = 2.49) category. In the final statement of Table 12, the mean scores indicated roughly similar to each other, which means that the two groups have no statistical difference. To conclude this section, the findings of the t-test analysis indicated that statements (*This brand would be my preferred choice*) and (*I would recommend this brand to others*) resulted non-significant, whilst (*I feel this brand is the only brand that I need*) resulted significantly at 0.07 level.

<table>
<thead>
<tr>
<th>Statements</th>
<th>Product category</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Sig. level</th>
</tr>
</thead>
<tbody>
<tr>
<td>14 - This brand would be my preferred choice</td>
<td>Hedonic</td>
<td>106</td>
<td>2.75</td>
<td>1.049</td>
<td>.896</td>
</tr>
<tr>
<td></td>
<td>Functional</td>
<td>98</td>
<td>2.73</td>
<td>1.127</td>
<td></td>
</tr>
<tr>
<td>15 - I feel this brand is the only brand that I need</td>
<td>Hedonic</td>
<td>106</td>
<td>2.22</td>
<td>1.014</td>
<td>.07</td>
</tr>
<tr>
<td></td>
<td>Functional</td>
<td>98</td>
<td>2.49</td>
<td>1.115</td>
<td></td>
</tr>
<tr>
<td>16 - I would recommend this brand to others</td>
<td>Hedonic</td>
<td>106</td>
<td>2.75</td>
<td>.944</td>
<td>.888</td>
</tr>
<tr>
<td></td>
<td>Functional</td>
<td>98</td>
<td>2.73</td>
<td>1.089</td>
<td></td>
</tr>
</tbody>
</table>

*Table 12. Results of the t-test on the effect of circular logo on brand resonance (SPSS output)*
6.4 Result of hypotheses

The desired objective of the research work is to prove that logo design shape has an effect on brand equity. In order to prove the statement, the hypotheses $H_1$, $H_2$, $H_3$, $H_4$, $H_5$, and $H_6$ have been formulated. Therefore, the t-test has been utilized and we have compared the means of scores of each question. Each hypothesis will be tested in the following paragraphs.

In order to test the hypothesis $H_1$, the mean scores of angular and circular logo shapes have been compared. As we can see from Table 13, the mean scores of hedonic product with angular logo is considerably higher than the functional product with angular logo, therefore, in case of a hedonic product with circular logo two out of three statements are lower than the functional product with a circular logo. Thus, $H_1$ has rejected by five statements out of six and by the reason of the significance level, where the t-test resulted as non-significance, $p>0.05$.

Therefore, some of the statements have almost similar mean scores between each other; this is one of the reasons that contributed to the rejection of the hypothesis. In addition, some possible causes that did not support the hypotheses have been indicated. Such as, respondents did not react distinctively to the product categories with angular logo shape and circular logo shape; they could not indicate their feelings (durability, quality, care, safety, excitement, etc.) toward the product by only observing it from the photo in the online survey platform. In contrast with the literature study of Jiang, Gorn, Galli, & Chattopadhyay (2016), the method that prior literature used was experimental work, whilst we have used non-experimental work. During the experimental work respondents can see the photo of the products while online survey shows only once followed by its questions.

<table>
<thead>
<tr>
<th>Angular logo shape</th>
<th>Statements</th>
<th>Hedonic product (Perfume)</th>
<th>Functional product (Sneaker)</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Q1</td>
<td>I can recognize the brand among the other competing brands</td>
<td>2.97</td>
<td>2.49</td>
<td>.001</td>
</tr>
<tr>
<td>Q2</td>
<td>Logo characteristics of the product come to my mind quickly</td>
<td>2.89</td>
<td>2.63</td>
<td>.113</td>
</tr>
</tbody>
</table>
I can quickly recall the logo of the brand

Circular logo shape

<table>
<thead>
<tr>
<th>Statements</th>
<th>Hedonic (Perfume)</th>
<th>Functional (Sneaker)</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q1  I can recognize the brand among the other competing brands</td>
<td>2.66</td>
<td>2.72</td>
<td>.737</td>
</tr>
<tr>
<td>Q2  Logo characteristics of the product come to my mind quickly</td>
<td>2.78</td>
<td>2.76</td>
<td>.943</td>
</tr>
<tr>
<td>Q3  I can quickly recall the logo of the brand</td>
<td>2.71</td>
<td>2.80</td>
<td>.595</td>
</tr>
</tbody>
</table>

Table 13. Results of the t-test – Brand salience

( SPSS output )

The hypothesis H2 and H3 were proposed and examined by the Independent sample t-test. According to the Jiang, Gorn, Galli, and Chattopadhyay (2016), the perception of durability has a relation with the circular and angular logo, thus the following statements (Q4-Q7) in Table 14 were asked to test the hypothesis H2 and H3. Unfortunately, the result of the t-test showed that the significance level of the statements resulted higher than the cut-off value (p<0.05). Therefore, the angular and circular logo on the hedonic and functional product did not have a significant influence on brand performance and brand imagery. Thus, hypothesis H2 and H3 were not supported by the analysis.

In addition, another possible reason for hypotheses rejection is that respondents could not feel the quality of the product just by observing the photo of the product, thus, they may not indicate differently. According to the Muijs (2004), when respondents do not have a preferable choice to answer in the survey questionnaire, they tend to choose the “Neither important nor unimportant” answer if the questionnaire did not included “Don’t know” answer.

Angular logo shape

<table>
<thead>
<tr>
<th>Statements</th>
<th>Hedonic product (Perfume)</th>
<th>Functional product (Sneaker)</th>
<th>Sig.</th>
</tr>
</thead>
</table>
The hypothesis H4 proposed to test the Brand Feelings, the independent sample t-test was utilized in order to examine the hypothesis H4. In terms of mean scores, three statements out of six supported our hypothesis. Moreover, the level of significance was higher than the cut-off value; in fact, there is not enough evidence to support the hypothesis. Thus, the hypothesis H4 has rejected.
The brand is innovative  

Q9 The quality of the brand is consistent  

Q10 My overall opinion of the brand is good  

Table 15. Results of the t-test – Brand feelings  

(Handwritten notes)

The following statements in the Table 16 below have been created to test the hypothesis H5. In order to examine the hypothesis H5, the Independent Sample t-test has been utilized. The table below illustrates the mean scores and significance levels of the brand judgments on each statements. As we can see, significance levels of the statements have reached the cut-off point (0.05), so there are no endorsement to verify the hypothesis H5, which means a difference between two sample groups does not exist.

Table 16. Results of the t-test – Brand judgments  

(Handwritten notes)
In the Table 17, three statements (Q14-Q16) have been analyzed by Independent Sample t-test to check the relevance of the hypothesis \( H_6 \). Therefore, the mean scores and significance levels of the each statements have been presented in the table below. The result of the significance level indicated that there are no difference between the two groups, in the other words, people does not respond distinctively to the hedonic and functional products except one statement where we saw significance. In some cases, people less prefer circular logo on functional product than on hedonic product. Thus, the hypothesis \( H_6 \) has rejected by the result of five statements out of six.

<table>
<thead>
<tr>
<th>Statements</th>
<th>Angular logo shape</th>
<th>Functional product (Sneaker)</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q14 This brand would be my preferred choice</td>
<td>2.81</td>
<td>2.77</td>
<td>.750</td>
</tr>
<tr>
<td>Q15 I feel this brand is the only brand that I need</td>
<td>2.33</td>
<td>2.34</td>
<td>.966</td>
</tr>
<tr>
<td>Q16 I would recommend this brand to others</td>
<td>2.81</td>
<td>2.74</td>
<td>.648</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Statements</th>
<th>Circular logo shape</th>
<th>Functional product (Sneaker)</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q14 This brand would be my preferred choice</td>
<td>2.73</td>
<td>2.75</td>
<td>.896</td>
</tr>
<tr>
<td>Q15 I feel this brand is the only brand that I need</td>
<td>2.49</td>
<td>2.22</td>
<td>.07</td>
</tr>
<tr>
<td>Q16 I would recommend this brand to others</td>
<td>2.73</td>
<td>2.75</td>
<td>.888</td>
</tr>
</tbody>
</table>

*Table 17. Results of the t-test – Brand resonance (SPSS output)*

To conclude the result of the hypotheses, the findings are revealed that there is no statistical difference between two product categories, where most of the significance level of statements resulted higher than the cut-off point. Therefore, the customer-based brand equity components are not influenced by the angular and circular logo shapes on hedonic and functional products, since we have analyzed the circular and angular logo shapes on two different product categories (hedonic and functional). Thus, respondents did not act differently on two product categories.
7 Conclusion

7.1 Research question

The core objective of the research question was to find out the influence of the logo design on the brand equity, in terms of six components of customer-based brand equity model. In order to achieve the objective, prior literature that related to the topic have been studied. Furthermore, the research question has proposed to underline and fill the gap of this topic.

This chapter will briefly conclude by summing up all the processes of the research work and findings that analyzed and investigated through the study. The main findings of our research study will be discussed briefly in the beginning and that is followed by the recommendations for further research. Finally, the limitations that we have faced during the process and directions of future research will be presented.

7.2 Main findings

In the conducted survey questionnaire, altogether 204 respondents from 39 different nationalities participated, which is an enormously diverse result, where the gender ratio indicated as 63% of female and 37% of male respondents. Therefore, as we have found out that among brand aspects consumers tend to consider quality in case of choosing the hedonic and functional product. In terms of the sneaker, the logo has rated as the fourth most important factor, whilst the logo preferred as the fifth important factor for the perfume.

In order to analyze the result where we had two logo shapes and two product categories, the independent sample t-test has been used to evaluate the data. The independent t-test evaluates two variables for two groups where perfectly fit for our analysis. Therefore, the research revealed that the most of the statements of the angular and circular shape of a logo resulted as non-significant (p>0.05), which means there is no statistical difference between these two groups. Survey respondents did not differentiate significantly the two product categories between each other. However, in the case of brand salience, we saw that respondents prefer hedonic product somewhat favorably than the functional product with angular logo shape, where we saw significant result $0.001<0.05$. Moreover, in the case of brand performance and imagery
(significance level = 0.74) respondents indicated that functional product is less durable with circular logo than the hedonic product. Lastly, for some reasons people less prefer the circular shape of a logo on the hedonic product than functional product, where the significant level of the statement indicated at 0.07.

In fact, prior literature on this topic has been conducted various experimental studies (Jiang, Gorn, Galli, & Chattopadhyay, 2016) on the influence of angular and circular logo shapes on brand attribute judgments connecting with mental imagery concept. Their experiment focused to analyze the comfortableness and durability of the products. They found out that logo shapes have an ability to improve product attributes (Jiang, Gorn, Galli, & Chattopadhyay, 2016). In our case, the study analyzed whether logo shapes have an influence on brand equity.

Thus, we have illustrated some potential causes that did not support the hypotheses. For instance, respondents did not react distinctively to the product categories with angular and circular logo shape, other product attributes (such as perceived quality, price, package, etc.) may have a significant effect on brand equity, and respondents could not indicate own feelings toward the product by only observing it from the photo.

Concerning the relationship between the shape of a logo and brand equity on hedonic and functional product categories, the research findings declared that the association was less effective.

7.3 Recommendations based on the findings

In this research study, we analyzed the effect of logo design on brand equity on two product categories, where logo design is illustrated as circular logo and angular logo. For further research, it is important to create an appropriate logo design that fits with the products that are chosen for the product category. Thus, it will be better to create the angular and circular shape of a logo as simple as possible with strong effect, where it does not seem as abstract logo. Moreover, it is feasible to consider choosing different products for the product category, where the research work utilized sneaker as a functional and perfume as a hedonic product.

Therefore, in this research work, we used a quantitative method specifically non-experimental method where it provides online survey. Nevertheless, in the further
research, a qualitative method is recommended for the research methodology, in order to see the feelings and reactions of the respondents but also show the tangible photos of the products with the logos on it where respondents could look at it without any problems. The above mentioned recommendations are for the purpose of making better research work in the future.

7.4 Research limitations

Since the research study was conducted by the quantitative method, there were some limitations during the progress of the study. The limitation is the section where we learn further and realize based on previous academic work. First, it is important to mention that during the online survey, respondents saw the logo only two times on each product, not repeatedly. Where it becomes the issue that respondents mainly focused on the statements not the logo. Second, the logos did not illustrate the angularity and circularity of the shape extremely. The extreme difference may elicit a strong positive or negative response from the respondents. These underlined limitations may give an influence on the consequence of the research.
8 References

- Brand, P. Z. (1999). *Managing Brand Equity*. 65–100. [https://www.semanticscholar.org/paper/Managing-Brand-Equity-Brand/5a49dfc627a8ce55369687bc53c17b06c84e5252](https://www.semanticscholar.org/paper/Managing-Brand-Equity-Brand/5a49dfc627a8ce55369687bc53c17b06c84e5252)


9 Appendices

9.1 Appendix 1: Research questionnaire

Dear respondent,

Thank you for showing interest taking part in this study.

My name is Baatarkhuu Altai. I am a second year Marketing postgraduate student at Corvinus University of Budapest. The purpose of this survey is to investigate the opinion of consumers about logo design. Your responses will be only used for the purpose of the dissertation paper.

All the responses collected from the survey will not be identifiable and the data will remain confidential.

If you have any questions regarding to the survey please contact me by email at altai.baatarkhuu@gmail.com

1. Please indicate to what extent do you consider the aspects of a brand, when you choose sneakers (boots).

<table>
<thead>
<tr>
<th>“totally unimportant”</th>
<th>“totally important”</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 2 3 4 5</td>
<td>1 2 3 4 5</td>
</tr>
</tbody>
</table>

- Brand name
- Price
- Quality
- Logo
- Brand slogan
- Package

2. Please indicate to what extent do you consider the aspects of a brand, when you choose a perfume.

- Brand name

1 2 3 4 5
3. In the next step, I would like to ask you to look at the picture below and examine the design of the product carefully.

Test A

Test B

<table>
<thead>
<tr>
<th>“totally disagree”</th>
<th>“totally agree”</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 I can recognize the brand among other competing brands</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>2 Logo characteristics of the product come to my mind quickly</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>3 I can quickly recall the logo of the brand</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>4 This perfume/sneakers is more durable than other brands</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>5 I feel good about the brand aesthetic</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>6 Compared to other brands, the brand has superior quality</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>7 For me the brand is caring</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>8 The brand is innovative</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>9 The quality of the brand is consistent</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>10 My overall opinion of the brand is good</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>11 The brand gives me a feeling of excitement</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td></td>
<td>The brand gives me a feeling of calm and peacefulness</td>
</tr>
<tr>
<td>---</td>
<td>-----------------------------------------------------</td>
</tr>
<tr>
<td>12</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>13</td>
<td>The brand provides me a feeling of safety</td>
</tr>
<tr>
<td>14</td>
<td>This brand would be my preferred choice</td>
</tr>
<tr>
<td>15</td>
<td>I feel this brand is the only brand that I need</td>
</tr>
<tr>
<td>16</td>
<td>I would recommend this brand to others</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Test A</th>
<th></th>
<th>Test B</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>I can recognize the brand among other competing brands</td>
<td></td>
<td>I can recognize the brand among other competing brands</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Logo characteristics of the product come to my mind quickly</td>
<td></td>
<td>Logo characteristics of the product come to my mind quickly</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>I can quickly recall the logo of the brand</td>
<td></td>
<td>I can quickly recall the logo of the brand</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>This perfume/sneakers is more durable than other brands</td>
<td></td>
<td>This perfume/sneakers is more durable than other brands</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>I feel good about the brand aesthetic</td>
<td></td>
<td>I feel good about the brand aesthetic</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Compared to other brands, the brand has superior quality</td>
<td></td>
<td>Compared to other brands, the brand has superior quality</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>For me the brand is caring</td>
<td></td>
<td>For me the brand is caring</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>The brand is innovative</td>
<td></td>
<td>The brand is innovative</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>The quality of the brand is consistent</td>
<td></td>
<td>The quality of the brand is consistent</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>My overall opinion of the brand is good</td>
<td></td>
<td>My overall opinion of the brand is good</td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>The brand gives me a feeling of excitement</td>
<td></td>
<td>The brand gives me a feeling of excitement</td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>The brand gives me a feeling of calm and peacefulness</td>
<td></td>
<td>The brand gives me a feeling of calm and peacefulness</td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>The brand provides me a feeling of safety</td>
<td></td>
<td>The brand provides me a feeling of safety</td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>This brand would be my preferred choice</td>
<td></td>
<td>This brand would be my preferred choice</td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>I feel this brand is the only brand that I need</td>
<td></td>
<td>I feel this brand is the only brand that I need</td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>I would recommend this brand to others</td>
<td></td>
<td>I would recommend this brand to others</td>
<td></td>
</tr>
</tbody>
</table>
4. Please indicate your age. ____ ages
5. Please indicate your gender.
   - Male
   - Female
6. What is your nationality? ______________
7. What is your highest level of education achieved?
   - Less than high school
   - High school graduate
   - Undergraduate degree
   - Postgraduate degree
   - Doctorate
   - Other
8. Please indicate your place of living. __________
9. Please indicate your occupation. __________