

**AN ANALYSIS OF CONSUMER EVALUATIONS
OF BRAND EXTENSIONS: THE CASE OF B2B BRANDS
EXTENDED INTO B2C MARKETS**

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**TÜKETİCİLERİN MARKA GENİŞLEME STRATEJİLERİNE
KARŞI TUTUMU: İŞLETMELER ARASI PAZARDAN (B2B) TÜKETİCİ
PAZARINA (B2C) GEÇİŞ ÜZERİNE BİR İNCELEME**

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FOREWORD

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SUMMARY

Brand extension is defined as a current brand name used to enter a completely different product class. In other words, it is the use of a well-known brand name to launch a new product or to differentiate the existing product. Brand extensions allow companies to leverage the equity in established brands, and thereby reducing risk associated with launching new products (Aaker and Keller, 1990). Brand extensions are considered profitable because brands that are already known and recognized are generally assumed to require lower new-product introduction expenses such as advertising, trade deals or price promotions (Völckner and Sattler, 2006). Therefore, brand extension strategies represent a popular way to reduce the risks associated with the introduction of new products.

A plethora of brand extension studies have been done in recent years. However, there is a paucity of research investigating business-to-business brand extensions. Virtually, the study of Tang et al. (2008) upon B2B extension in information and communication technology (ICT) industry in Taiwan, is the only academic research that the author could find in the field of B2B brand extensions has been published to date.

Hence, this thesis aims to investigate the issue of brand extension evaluation in a different context, namely B2B brand extension into the consumer market. A new model is developed by combining Aaker and Keller's (1990) brand extension model with theories from business-business branding as well as other consumer branding concepts, and tested both qualitatively and quantitatively to understand how consumers evaluate brand extensions.

The results of the present study show support for this new model. More specifically, the results indicate that in the context of business-to-business brand extensions, consumers use the brand concept consistency, product-level relatedness and transferability of skills and resources as major cues to evaluate extensions. Perceived quality, innovativeness and environmental concerns are also relevant cues.

As a consequence of these findings, branding strategies that stretch business-to-business brands into the domain of consumer markets can be successful in cases where consumers perceive a fit with respect to skills and resources, brand concept, and existing products, and when the parent brand is perceived as having high quality, and as being innovative and environmentally responsible.

TÜKETİCİLERİN MARKA GENİŞLEME STRATEJİLERİNE KARŞI TUTUMU: İŞLETMELER ARASI PAZARDAN (B2B) TÜKETİCİ PAZARINA (B2C) GEÇİŞ ÜZERİNE BİR İNCELEME

ÖZET

Marka genişlemesi ya da marka yayma, pazara sunulan yeni ürünler için mevcut marka isminin kullanılması olarak tanımlanabilir. Diğer bir deyişle, iyi tanınan bir marka isminin yeni ürün gruplarında veya ürün farklılaşmalarında kullanılması anlamına gelmektedir. Marka genişlemesi ile işletmeler, güçlü oldukları alanlarda yarattıkları kaldıraç etkisinden yeni alanlarda da faydalanarak, var olan güçlü markalarını yeni ürünlere taşımayı ve maliyetleri düşürmeyi amaçlamaktadırlar (Aaker ve Keller, 1990). Yeni bir marka yaratmak, yüksek maliyetleri de (pazara giriş, tanıtım masrafları, dağıtım kanallarıyla anlaşma gibi) beraberinde getirmektedir. Yeni bir markayı pazara kabul ettirebilmek için katlanılacak maliyetlerden kaçınmanın en kolay yolu, halihazırda tüketiciler tarafından kabul görmüş ve tanınmış bir marka adını kullanmaktır (Völckner ve Sattler, 2006). Bu nedenle marka genişleme stratejilerine, işletmeler tarafından daha az masraflı ve daha az riskli bir yöntem olarak sıklıkla başvurulmaktadır.

Literatürde marka genişlemesi ile ilgili birçok çalışma yer almaktadır. Fakat bu çalışmaların hemen hepsi tüketici pazarında (B2C) yer alan firmaların yine aynı pazara olan genişleme stratejilerini incelemektedir. Fakat günümüzde işletmeler arası pazardan (B2B) tüketici pazarına geçiş yapan bazı örnekler de söz konusudur. Ancak literatürde yer alan, bu konuda yapılmış tek çalışma Tang ve arkadaşlarının 2008 senesinde yayınlanan ve orijinal ekipman üreticisi firmaların (OEM) marka genişleme stratejilerini inceleyen çalışmalarıdır.

Bu çalışma ile, işletmeler arası pazarda (B2B) faaliyet gösteren iki küresel markanın, tüketici pazarına (B2C) giriş stratejilerine olan tüketici tutumunu ölçerek literatürdeki bu boşluğun doldurulması hedeflenmektedir. Bu alanda bir ilk olan ve daha sonra birçok araştırmacı tarafından tekrar edilen, Aaker ve Keller'in 1990 yılındaki çalışması temel alınmış ve yine aynı alanda geliştirilen farklı teori ve modellerden faydalanılarak yeni bir model oluşturulduktan sonra, nitel ve nicel araştırma metodolojisi kullanılarak model test edilmiştir.

Elde edilen bulgular, oluşturulan yeni modeli destekler yönde olup, “B2B pazarda faaliyet gösteren endüstriyel markaların, marka kavramına uygunluk”, “markanın var olan ürünleriyle olan ilişkisi” ve “firma kaynak ve yetkinliklerinin kullanılabilirliği” faktörlerinin tüketici tutumunu belirleyen ana faktörler olduğunu işaret etmektedir. Bu üç ana faktörün yanı sıra, “markanın algılanan kalitesi”, “markanın tüketiciler tarafından yenilikçi olarak algılanması” ve “çevre sorumluluğuna sahip olması” da marka genişlemesine olan tüketici tutumunu etkileyen diğer faktörler olarak belirlenmiştir.

1. INTRODUCTION

1.1 Background: Leveraging the Brand Across Sectors

The changing market dynamics and heightened competition of the global economy have amplified the role of brands to an unsurpassed level. Brand marketers seek ways to achieve growth while reducing both the cost of new product introductions as well as the risk of new product failure. A popular way of launching new products has therefore been brand extension to leverage the equity of an existing brand into a new sector, market, or product category.

Brand extensions are attractive to firms that face the reality of high new product failure rates because they provide a way to take advantage of brand name recognition and image to enter new markets. The leverage of a strong brand name can substantially reduce the risk of introducing a product in a new market by providing consumers the familiarity of and knowledge about an established brand. Moreover, brand extensions can decrease the costs of gaining distribution and/or increase the efficiency of promotional expenditures (Aaker and Keller, 1990). Since brand extensions imply launching new products, a key issue is to what extent these extensions are successful.

Keller (2003) suggests “it is not a question of whether a brand should be extended, but rather where, when, and how it should be extended. Simply put: extend the brand –if it is possible”. Reality shows that companies do this to a large extent: Over 80 percent of all new products are categorized as brand extensions (Mortimer, 2003). This is not to say that brand extensions are risk-free –it is crucial to know where the “boundaries” of the brand are. Understanding these limits is not a simple matter, however. As an example, whilst the stretching attempt of deodorant brand Lynx into hair care market was unsuccessful; Gillette, the razor brand of Procter and Gamble, was a successful attempt to stretch into after shave and deodorant markets. Thus, even if the product category of the extension is intuitively related to the product category of the parent brand, there can still be a

lack of fit. On the other hand, brand extensions do not necessarily have to stick to their parent category. The now-famous department store chain Marks and Spencer launched financial services, although it was a totally different area than retailing. Nevertheless, it worked well, because its customers associated the parent brand and the financial services with trust (Keller, 2003).

Table 1.1: B2C extensions of companies formerly operating in B2B markets only

Company	Founded	Initial Offering	B2C Extension	Date of Extension
IBM	1911	Tabulating machines	Personal Computers (PCs)	1981
Nokia	1865	Forestry	Rubber boots Mobile phones	1960s 1980s
Philips	1891	Carbon-filament lamps	Radio	1927
Microsoft	1975	Basic computer programming language	MS-DOS	1981
Caterpillar	1925	Heavy equipment	Clothing and footwear	1994
Mitsubishi	1870	Shipping	Automobiles	1917
Merrill Lynch	1907	Stocks and bonds brokerage	Cash Management Account	1977

Source: (Tang et al., 2008) and concerned company websites.

Unfortunately, all discussions of branding are structured in a consumer marketing context. However, some of the world’s most powerful brands are in business-to-business (B2B) markets; such as ABB, Caterpillar, Cisco, DuPont, FedEx, GE, Hewlett Packard, Intel and Boeing (Webster and Keller, 2004). The question then is: what if B2B brand wants to extend into the business-to-consumer (B2C) market? This may seem confusing, but there are various examples about famous B2C brands, which have once been B2B brands and now serving as consumer brand (see Table 1.1). For instance, global mobile phone brand Nokia started out in forestry (B2B) in 1865, and then began selling rubber boots in the 1960s, and it was not as famous as today until it started making mobile phones in 1980s (Tang, Liou and Peng, 2008). Other examples include Philips, Mitsubishi, Microsoft, Caterpillar and IBM. This perspective highlights the fact that a stretch from B2B to the consumer market is perhaps not that uncommon.

1.2 Problem Definition and Objectives

In order to determine whether a brand extension is able to gain profit from its parent brand while avoiding or minimizing potential disadvantages; it is essential to understand how customers evaluate the extensions, as the success is largely depend on this evaluation (Klink and Smith, 2001). A landmark study in this area was conducted by Aaker and Keller in 1990, followed by various academic researches on brand extensions (Park, Milberg and Lawson, 1991; Bottomley and Holden, 2001; Patro and Jaiswal, 2003; Völckner and Sattle, 2007) have been made further on. However, there is a paucity of research investigating brand extensions into the business-to-business markets.

B2B branding is buyer-focused and corporate brand image is more likely to span product classes. Therefore, recent researches are more focused on corporate brand identity and communication of intangible brand attributes. Virtually, the study of Tang et al. (2008) upon B2B extension in information and communication technology (ICT) industry in Taiwan, is the only academic research that the author could find in the field of B2B brand extensions has been published to date.

This study aims to investigate the issue of brand extension evaluation in a different context, namely B2B brand extension into the consumer market. The purpose of this research is also: (1) to determine whether a broad replication of Aaker and Keller's (1990) brand extension model is feasible in B2B context, (2) to examine whether factors evaluating brand extensions can be successfully combined to form an effective model for predicting extension acceptance in the research context; and (3) determine the relative importance of these factors affecting the evaluation of brand extensions.

1.3 Contribution of the Study

This study aims to provide contributions to both academic fields and business life.

1.3.1 Theoretical contribution

Aaker and Keller's (1990) framework has been subject to substantial research as a widely replicated study (Bottemly and Holden, 2001), and has also been confirmed in marketing textbooks. Replications are seen as crucial for empirical generalization

and knowledge development. Furthermore, it can be argued that those academic research publications that are peer-reviewed are worthy of replication (Bottemly and Doyle, 1996). Nijssen and Hartman (1994) contend that a high quality empirical generalization should be “characterized by its scope, precision, usefulness and link with the theory” and usefully defines domain which excludes most marketing practice, teaching and exercise.

The current study is a broad replication of Aaker and Keller’s (1990) model in the sense that it does not generalize across brand extensions, but does attempt to make a generalization of the model by expanding the scope of which it has previously studied. Scope can be defined as the domain (e.g. sectors, countries, situations) of which an empirical generalization holds. Concerning the scope, this study will examine whether Aaker and Keller’s (1990) predictions are extra-sectoral, that is, whether parent brand equity built up in one sector (B2B) can be leveraged through brand extensions in another sector (B2C).

Besides, empirical replication, an additional contribution of present study is model development. Bottemly and Doyle (1996) point out “brand concept consistency” as a better facilitator of brand extension acceptance than product related similarity (used in Aaker and Keller’s (1990) model and its replications). Besides, Farquar, Herr and Fazio (1990) also conclude that “product-level relatedness” is a factor that is different and more efficient than product-level similarity in terms of consumer evaluation. The current study will therefore integrate brand concept consistency and product level relatedness with Aaker and Keller’s (1990) model to confirm the proposals of Bottemly and Doyle’s (1996) and of Farquar et al. (1990).

A last contribution of this study is to add a relatively small supply to B2B/industrial branding theory by focusing on B2B brands mainly.

1.3.2 Practical contribution

It may be of particular interest for managers to know whether their B2B brands can be extended into the consumer markets, especially when a strategic opportunity arises, and thereby brand values can be created and delivered in B2C markets. In such an attempt, the findings of the current study could present managers whether brand extension would be accepted by consumers in a variety of markets. The

findings of the study aim also pinpoint which of the brand extension factors they should focus on if an extension strategy is pursued.

1.4 Thesis Outline

The thesis is structured as follows: Subsequent to the introduction, Chapter 2 gives some relevant literature review on basic issues related to branding; such as brand equity concept, advantages of powerful brands, brand core values, competence and positioning and B2B branding. Thereby, connections to the subject of brand extensions are drawn and Chapter 3 deals with fundamental issues concerning brand extensions as a strategy for growth. In this context, brand extension concepts and theories from both consumer and corporate perspectives are presented. This section sets the stage for the conceptual framework, in Chapter 4. In this part, hypotheses are presented on the theoretical grounding given in preceding chapters. This is followed by the research design of the current study, in Chapter 5. Chapter 6 contains the research findings, where the empirical data are analyzed, hypotheses are tested and interpreted. Finally, a summary of findings and conclusions are given, in Chapter 7. Implications of the study - both theoretical and managerial- are presented in this final section, as well as limitations and directions for future research.

2. BASIC CONCEPTS RELATED TO BRANDING

The complexity of both brand offerings and marketing communication options has significantly increased in recent years. A number of competitive challenges now exist for marketers. Two questions often arise regarding brands: “What makes a brand strong?” and “How do you build a strong brand?” To help answer these questions, customer based brand equity (CBBE) model provides a unique point of view as to what brand equity is and how it should be built, measured and managed (Keller, 2003).

2.1 Concept of Brand Equity

Rust, Zeithaml, and Lemon (2000) define brand equity as the customers’ subjective and intangible assessment of the brand, above and beyond its objectively perceived value. When the customer has a high level of awareness and familiarity with the brand and has some strong, favorable and unique brand associations in the memory, customer-based brand equity arises. In some cases, brand awareness alone is sufficient to result in more favorable consumer response. In most other cases, however, the strength, favorability, and uniqueness of the brand associations play a critical role in determining different response making up the brand equity (Keller, 2003).

In order to build up successful branding strategies, customers must be convinced about the significant differences among brands in any category and a brand equity must be created. As key issue to branding, consumers must *not* think that all brands in the category are the same. Therefore, establishing a high level of *brand awareness* and a positive *brand image* in consumer memory produces the knowledge structures that can affect consumer response and produce different types of customer-based brand equity (Keller, 2003).

2.1.1 Brand awareness

According to Keller (2003), brand awareness consists of brand recognition and brand recall performance. Brand recognition relates to consumers' ability to confirm prior exposure to the brand when given the brand as a cue. In other words, brand recognition requires that consumers can correctly discriminate the brand as having been previously seen or heard. *Brand recall* relates to consumers' ability to retrieve the brand from memory when given the product category, the needs fulfilled by the category, or a purchase or usage situation as a cue. In other words, brand recall requires that consumers correctly generate the brand from memory when given a relevant cue.

As is the case with most information in memory, it is generally easier to recognize a brand than to recall it from memory. The relative information of brand recall and recognition will depend on the extent to which consumers make product-related decisions with the brand present or not. For example, if product decisions are made in the store, brand recognition may be more important because the brand will actually be physically present. Outside the store or in any situation where the brand is not present, it is probably more important that the consumer be able to actually recall the brand from memory (Keller, 2003).

Briefly, brand awareness is created by increasing the familiarity of the brand through repeated exposure (for brand recognition) and strong associations with the appropriate product category or other relevant purchase or consumption cues (for brand recall).

2.1.2 Brand image

Keller (2003) says, a positive brand image is created by marketing programs that link strong, favorable and unique associations to the brand in memory. The definition of consumer-based brand equity does not distinguish between the source of brand associations and the manner in which they are formed; all that matters is the resulting favorability, strength and uniqueness of brand associations. This realization has important implications for building brand equity. He also notes, besides marketer-controlled sources of information, brand associations can be also created in a variety of other ways: by direct experience; from information communicated about the brand from the firm or other commercial or non-partisan sources (*e.g., Consumer Reports*)

and word of mouth; and by assumptions or interferences from the brand itself (*e.g., its name and logo*) or from the identification of the brand with a company, country, channel of distribution, or some particular person, place or event.

2.2 Business-to-Business (B2B) Branding

When talking about brands most people think of Coca Cola, Apple, Ikea, Starbucks, Nokia, and maybe Harley Davidson. These brands also happen to be among the most cited best-practice examples in the area of Business-to-Consumer (B2C) branding. For these companies, their brand represents a strong and enduring asset, a value driver that has literally boosted the company's success. Hardly any company neglects the importance of brands in B2C. In Business-to-Business (B2B), things are different – branding is not meant to be relevant (Kotler and Pfoertsch, 2006). While consumer branding tends to focus more on marketing areas such as consumer behavior where emotions, perceptions and behaviors are in the center, B2B branding is less concerned with the buyer-seller interface more focusing on functionality and performance. Brand elements (such as brand names) are associated with offerings that consistently deliver superior functionality and are hence valuable resources (Anderson and Narus, 2004).

Many managers are convinced that brand loyalty is a non-rational behavior that only applies to consumer products (such as breakfast cereals and favorite jeans) and doesn't exist in the more "rational" world of B2B products. Products such as electric motors, crystal components, industrial lubricants or high-tech components are chosen through an objective decision-making process that only accounts for the so-called hard facts like features/functionality, benefits, price, service and quality etc. Soft-facts like the reputation of the business, whether it is well known, is not of interest (Kotler and Pfoertsch, 2006).

However, Mudambi (2002) proposes that B2B branding in general is more important than commonly believed as Microsoft, IBM, General Electric, Intel, HP, Cisco Systems, Dell, Oracle, SAP, Siemens, FedEx, Boeing are all vivid examples of that fact that there exists B2B brands among the world's most strong brands. Even though they are also operating in B2C segments, their main business operations are still more concentrated on B2B (Kotler and Pfoertsch, 2006).

2.2.1 Corporate versus product brands

Most of the brand extension research to date has focused on product brand extensions, and not on the role of corporate-level associations in the evaluation of extensions. Keller and Aaker (1997) conclude that, “In general, a corporate brand may be more likely to possess intangible attributes or organizational characteristics that span product classes than a product-brand whose associations are more likely to be product-specific.”

Corporate brands influence the consumers' evaluation of the brand extension in a way, which is different from product brands (Keller and Aaker, 1997). Corporate brands represent the manufacturer of products or provider of services, and therefore, company perceptions may provide credibility about the source. In the advertising literature, it has been shown that source credibility is an important determinant of consumer evaluations and response. In the case of corporate brand extensions, corporate credibility will affect the consumers' evaluations of the extension. Consumers will evaluate the extension higher when corporate credibility is high. Corporate credibility is especially important with respect to the credence attributes associated with services. These force consumers to rely more on cues and information signals that are generally available to them, such as corporate image. While Rao et al. (1997) state that brands convey important information about a company's image, Andrew (1998) argues that extensions of corporate brands are in effect image transfers (Ruyter and Wetzels, 2000).

2.2.2 Corporate strategy

According to Thompson and Strickland (2006), successful corporate branding is derived from Porter's competitive strategy model. In this model, he defines corporate strategy as the search for a favorable competitive position in an industry in order to establish a profitable and sustainable position against competitive forces and also he explains the basic units for competitive advantage as the activities that generate cost and create value for buyers/customers. The core of the Porter (1998) model is that strategy is defined according to (1) competitive scope, and (2) competitive advantage, the main point being that firms must choose between being different and being the lowest cost producer in a certain industry.

Kenneth Andrews provides a highly influential view of corporate strategy in his book published in 1971. In his own words, “Corporate strategy is the pattern of decisions in a company that determines and reveals its objectives, purposes, or goals, produces the principal policies and plans for achieving those goals, and defines the range of business the company is going to pursue, the kind of economic and human organization it is or intends to be, and the nature of the economic and noneconomic contribution it intends to make to its shareholders, employees, customers, and communities.” Andrews goes on citing that; in an organization of any size or diversity, “corporate strategy” usually applies to the whole enterprise, while “business strategy”, less comprehensive, defines the choice of product or service and market of individual businesses within the firm. Business strategy, that is, is the determination of how a company will compete in a given business and position itself among its competitors. Corporate strategy defines the businesses in which a company will compete, preferably in a way that focuses resources to convert distinctive competence into competitive advantage (Becerra, 2009).

To link the Porter model of corporate business strategy to corporate branding strategy, it is useful to first discuss the concept of corporate brand identity.

2.2.3 Corporate brand identity

Aaker and Joachimsthaler define brand identity as, in general, a set of brand associations that the brand strategist aspires to create or maintain (Martinez and Chaternatony 2004). Ind (1992) states that;

“Corporate identity is an organizations sense of self, and is unique. Identity is formed by the organizations’ history, its beliefs and philosophy, the nature of its technology, its ownership and its people, the personality of the leaders, its ethical and cultural values and its strategies. To uncover the real identity of a company the different parts mentioned above need to be analyzed. What does the history of the company look like, what are the beliefs, the nature of the technology, what values do the leadership prioritize, what cultural values are there in the company, as well as strategies, visions and missions?”

Keller and Aaker (1997) conclude, “in general, a corporate brand may be more likely to possess intangible attributes or organizational characteristics that span product classes than a product-brand whose associations are more likely to be product-

specific.” However, on the contrary, Anderson and Narus (2004), on the contrary, state that corporate brand elements may not surround any intangible meaning. According to them, the value of the brand lies in the involvement that business customers or suppliers have with offerings that constantly deliver greater performance and functionality.

Michell, King and Reast (2001) cite that; differentiated position, market leadership, perceived quality, brand image, quality, reliability and performance factors that are generally related to consumer markets are also relevant in B2B markets.

2.2.4 Corporate brand strategy

The choice of business-to-business brand strategy is derived from the fact that industrial marketing and buying is increasingly focused on relationships rather than individual transactions (Webster and Keller, 2004). Industrial customers want ongoing relationships with reliable suppliers of quality products and services. In a business-to-business context, a brand is a relationship between buyer and seller.

In 1959, Abratt presented a model to view corporate brand management in a holistic point way in which external and internal marketing communications are interrelated. In other words, there must be a “fit” in both internal environment (between corporate brand identity and the employees’ view of identity) and in external environment (between the marketing communication and stakeholders). Abratt’s model makes marketing communications strategy a dynamic force with “feedback-loops”. Thus, while the corporate image and employees’ view of corporate brand identity are passed on from the corporate identity via marketing communications, there are also feedbacks from customers to employees and the marketing communications. Hence, corporate identity and image are in a constant fluctuation and modification, in order to achieve a sustainable advantageous position for the organization (Ind, 1997).

Consistent with Abratt, Griffin (2002) also states that all corporate branding strategy decisions originate in both external factors (any factors that affect a corporate brand) and internal factors (factors such as corporate values and culture). Brand strategy decisions try to reduce the uncertainty that is caused by external factors – brand strategy is ‘outside-in’; and the more exposure a company has, the greater

is the need for consistent communications to stakeholders – brand strategy is also ‘inside-out’ (Griffin, 2002).

2.2.5 Corporate brand architecture

The strategic branding options are generally same in both B2B and B2C markets. Kotler and Pfoertsch (2006) define branding strategy as “the choice of common and distinctive brand elements a company applies across its various products and services it sells and the company itself. It reflects the number and nature of new and existing brand elements, guiding decisions on how to brand new products.” They also conclude that portfolio construction and management are the biggest challenges that businesses face with nowadays.

Brand architecture is defined by Rajagopal and Sanchez (2004) as “the organizing structure of the brand portfolio that specifies brand roles and the nature of relationships between brands and different product-market brand contexts”. According to Aaker and Joachimsthaler (2000), “brand architecture is the vehicle by which the brand team functions as a unit to create synergy, clarity and leverage brand.” They also cite that a brand portfolio includes all the brands and sub-brands attached to product-market offerings, including co-brands with other firms.

Since brand architecture identifies the relationship between brands, corporate entity, and products or services, a company-owned brand architecture development is crucial. Brand hierarchy definition is the most important facet for B2B companies in terms of their branding strategy. Brand hierarchy conceals the number and nature of all brand elements across the companies’ products and services. The range of possible associations between brands that businesses have is almost unlimited (Kotler and Pfoertsch, 2006).

Very few academic research has been conducted with respect to brand architecture, and there is no research to date in the context of business-to-business branding. Consistent with Aaker and Joachimsthaler’s (2000) definitions of sub-brands and branded house strategies, Webster and Keller (2004) also cite that, industrial brands use branding strategies for organizing their brand portfolio in order to take the advantage of a company “blanket brand”. Sub-brands are connected to a parent brand and they expand or modify the associations of that parent brand. Besides, in Aaker and Joachimsthaler’s (2000) house brand strategy, the role of the

parent brand is to be a dominant driver across multiple offerings and they describe that strategy as “putting a lot of eggs in one basket”.

3. BRAND EXTENSION AS A STRATEGIC GROWTH OPTION

An individual brand name can be selected to reflect the product's unique advantage or to promote the product as completely new, without worrying about any inappropriate connotations associated with a family or corporate name. But the cost of establishing an individual brand name may be prohibitive. Hence a firm might use an established brand name for the new brand. When this occurs, it is known as *brand extension*. Of course, the established brand should be in decline or its name might be disadvantage rather than an advantage for the new product. A brand extension tactic is adopted to reduce the cost of building a new brand as it facilitates buying by reducing perceived risk. Given the large number of products, there is more than the consumer can digest so using a trusted family brand name can help a firm get through the clutter (Shaughnessy, 1992).

Successful brands are the most important assets of a company that represent the knowledge created in consumers' mind via marketing programs and they are the result of the total resource investment in marketing the brand. All the marketing activities such as product development, market research, advertising, promotion, distribution and sampling take action to construct a brand image in its target audience.

There exist three different branding strategies. One strategy is to use individual brand names for different products without specifying a precise connection to the company or to each other. Procter and Gamble is a typical example with the brands (such as Tide, Bold, and Cheer etc) that have their own brand identity and can develop their own brand equity. Thereby, each brand would be rather insulated from adverse publicity. Indeed when the users of one of Procter and Gamble's brands claimed toxic shock syndrome, there was almost no link to the company's unrelated brands. One disadvantage arises as the company's identity is so removed from individual brands, a consumer looking for Procter and Gamble quality might wonder whether Fab (Colgate-Palmolive) or Dash (Procter and Gamble) is a Procter and Gamble brand (Pitta and Katsanis, 1995).

A second strategy is to use umbrella or family brand names in which the company name is on every product. As an example, Black and Decker have chosen this strategy, which has benefits but also risks. When the company name indicates quality, loyalty and value, each new product gets an immediate positive brand connection, but an unfavorable product issue, accident or recall might spoil the entire line. Black and Decker had been developing many brand associations with quality, masculinity, dependability, roughness and usage in construction. Then, the firm acquired General Electric small appliance line including hand mixers, toaster ovens, and other kitchen appliances and chose to use its family brand strategy. However, kitchen appliances generally express a less rugged image, which conflicted with power tools. Thereby, Black and Decker's experience serves as another example of the need to assess brand associations carefully (Sullivan, 1990).

The third strategy, as a combination of the other two strategies, is a sub-brand strategy in which the company name and individual brand name are one combined. Hence, Kellogg's Raisin Bran is diverse from Post Raisin Bran or any Raisin Bran. Family and combination branding can leverage positive associations that consumers feel for the company. The sub-brand strategy allows differentiation and the opportunity to create specific brand attitudes (Pitta and Katsanis, 1995).

In terms of an investment, brand equity has a limited life and it is subject to growth and support, or decay and attack by the rivals. It can even be injured by the well-intentioned actions of management. Brand extensions' negative effects on brand equity had been an issue to worry about in recent years. It is obvious that if a brand extension fails, then negative effect, which is called brand equity dilution, happens to appear on the core product (Loken and John, 1993). However, repeated extensions, even they are successful, may weaken or "wear out" a core product's brand equity. Generally, dilution effect is stronger. Nevertheless, some experts are warning that "repeated" successful or unsuccessful extensions might result in the total destruction of a brand's equity (Pitta and Katsanis, 1995). It is rational that exaggeration anything, including brand extension, can have adverse consequences but fortunately, managers do not often faced with such extreme conditions. The typical situation a product manager must consider is an individual introduction of a brand, given one or more existing brands.

3.1 Brand Extensions versus Line Extensions

Even though there exists an uncertainty in the literature, brand extensions and line extensions are discriminated from each other and both are likely to be incorporated under the generic “brand extensions” name. While in *line extension* a brand name is used to market a new product in the same category class, in *brand extension* a totally different category of product tends to be marketed. For instance, Sony’s new improved models of television represent line extensions whilst again Sony’s entering the digital cameras market represents brand extension (Aaker and Keller, 1990).

The extension strategy decision is encouraged by a variety of internal and external considerations that are intrinsic and extrinsic to the brand. Rangaswamy et al. (1993) state that the extendibility of a brand depends on the customer value, in terms of providing less or more utility to the customers with regard to its tangible or intangible characteristics.

There are various factors that signify the higher or fewer acceptances of the brand extensions by the target market. Generally, researchers point out the degree of similarity or “fit” between the original brand and the category of the extended product, as the critical factor for evaluating the extension. Next to the fit, which is mentioned in almost all recent researches, there are numerous other factors, such as perceived quality of the brand, that affect extension’s fate. For example, in Aaker and Keller’s (1990) study and also later research, it happened to be observed that perceived quality has direct or indirect effect on brand extension success (Martinez and Pina, 2003).

Several authors suggest that if customers see a fit, they will transmit their beliefs to the extension. The recent studies that have examined “fit” variable reached different results; whilst a majority has pointed out the positive effect of fit in brand extension (Aaker and Keller, 1990; Boush and Loken, 1991; Park et al, 1991; etc.), there also exist studies showing the ineffectiveness of “fit” (Smith and Park, 1992; Broniarczyk and Alba, 1994). Besides, according to Boush and Loken (1991), the perception of fit will depend on the inconsistency between the product categories marketed under the same brand umbrella (brand breadth) such that the greater the breadth, the more probable it is that links are identified between scarcely similar extensions.

As Zeithaml’s (1988) definition, perceived quality is “global assessment of the

consumer opinion about the superiority or excellence of a product” and has a broader meaning in terms of extensions exceeding physical product and covering the quality perception associated with the brand. Aaker and Keller (1990) claims that the relationship between perceived quality and the positive attitude towards the extension only exists if there is a fit between the original product and the extended one. However, later studies even including Keller and Aaker (1992) shows that that relationship is regardless of fit and so perceived quality will always have a direct effect on brand extension evaluation.

Finally, in order to perform an extensive analysis, a mass of other significant factors must be identified and considered such as the number of extensions (Keller and Aaker, 1992; Dacin and Smith, 1994), the information provided (Aaker and Keller, 1990; Klink and Smith, 2001), the consumer innovativeness (Klink and Smith, 2001) and the time of exposure to the extension (Klink and Smith, 2001). There are certainly many more factors, and therefore the researchers will be the ones to decide which aspects to consider their research, thus evaluating the importance of each factor with regard to the measurement cost, time and technical ability while revealing diverse variables on a questionnaire or any other data tools.

3.2 Advantages of Brand Extension Strategy

Taylor (2004) claims that the brand extension strategy is so popular because it is less risky and less costly than the new brand development. Chaternatony and McDonald (1998) also point the same economical advantage by indicating “the economics of establishing new brands are pushing companies more towards stretching their existing name into new markets. Daunted by the heavy RandD costs, and more aware of the statistics about failure rates for new brands, marketers are increasingly taking their established names into new product fields”

The advantages of brand extension strategy instead of new brand construction may be counted as the following:

Consumer knowledge: Using the outstanding strong brand to “promote a new product” is advantageous in terms of creating “awareness and imagery”. As the main brand has already had its association, then the mission is to communicate the specific benefits of the innovation (Taylor, 2004).

Consumer trust: Taylor (2004) claims that the existing well-known-strong brands represent a promise –of quality, useful features etc. - for the consumer. Hence, the extension will take the advantage of this reputation and this good opinion about the brand to create “a convincing value intention in a new segment or market”. In that study he found out that, while 58% of UK consumers are more likely to try a new product from a brand they knew, only 3% is for a new brand.

Customers are expecting to transmit their information about the brand to the extension. If the general opinion towards brand is positive, so is the behavior towards extension. If a customer is satisfied with an extension, s/he will be more willing to repurchase the same brand; hence, such successful extension will gain loyalty (Keller, 2003).

Besides brand associations, extension can transmit quality associations, too. In order to avoid promotion wars based on product specifications, one can compete based on perceived high quality. For instance, Hewlett-Packard has used this strategy by extending its name to various products and so has extended its “quality umbrella”. When perceived quality is high, then it is important to widen the benefits of a core product with an extension. Without perceived high quality, mission is impossible (Pitta and Katsanis, 1995).

Lower cost: Compared to a new brand launch, brand extension strategy is less costly especially because even though the product is new, brand is not at all. Studies show that “cost per unit of trial is 36% lower and that repurchase is also higher with an extension” (Taylor, 2004). Furthermore, Smith and Park (1992) also confirm that for the same market share, in terms of advertising, the budget is lower for brand extension.

Enhancement of brand visibility: Aaker (2004) claims that; brand extension in a different market or category is more efficient than advertising. Besides, he also suggests that as loyal customers will be again purchasing the brand even it is a different field.

Providing a source of energy for a brand: In some situations, that the brand is a little worn-out, brand image is expected to refresh through the extension. Certainly, this later gives energy to the brand because it increases the frequency with which the brand is associated with good quality, innovations and large range of products.

Besides, the customer is exposed to the brand more often and it can build up a idea of “this brand is a good one”. Aaker (2004) also states that, the brand existence on a wide range of products can improve the brand popularity. The brand-contact level – both on the shelves or via marketing communications and communication– is very important and it improves the brand recalling.

Defensive strategy: An extension can intercept the rivals from gaining a market share and can be “worthwhile even though it might struggle” according to Aaker (2004). Microsoft, for example, has decided to run in different fields aiming to bind the capability of competitors to trespass on core business areas.

3.3 Disadvantages of Brand Extension Strategy

However, this strategy cannot only have advantages. Hence, there are also disadvantages listed by researchers:

Dilution of the existing brand image: A transfer process in which core brand associations are passed on to the extension often describes brand extension evaluation. Brand associations can be different among consumers, across usage situations, and in different competitive environments. Potentially, the core brand may present a group of outstanding, positively evaluated, significant associations that are appropriate within or across product categories. Ideally, associations of a core brand can give a complicated, but also well-defined image to an extension. A well-established brand usually has a well-defined brand image. A big advantage of brand extension is the instant communication of a salient image. For instance; when Weight Watchers was acquired by H.J. Heinz and introduced as the line of low calorie foods, The Weight Watchers name contributed to recognition and many positive brand associations to the food line (Pitta and Katsanis, 1995).

Again, Taylor (2004) again emphasizes that the extensions are using the most important asset of the company, which is the brand name. However, while it presents a major advantage for the extension, it can also be a huge risk for the existing brand as well according to the risk of brand image dilution. All those positive and negative consequences are “reciprocity effects” and defined as “a change in the initial customer’s behavior regarding the brand, after an extension” (Taylor, 2004).

A dilution of the brand capital can occur because of unwanted associations or of weakening of the existing associations. This later can be a result of new associations transferred from the extension. Definitely, an accident about a product can lead to stain the image of the all brand. Furthermore, it is sometimes difficult to link one brand to two products without weakening customer's perception of brand position in their mind.

Aaker (2004) points out this problem arguing that "the associations created by an extension can fuzz a sharp image that had been a key asset, and at the same time reduce the brand's credibility within its original setting" and recommends companies about any confusion that may appear in customers' mind. He also states that, when a brand is positioned as it is not "for everyone", over-extensions could the image of brand selectivity. He points out the example of Gucci brand appearing on a lot of product (there are almost 14,000 Gucci products), and shows this situation as the part of the factors leading to the "fall of that brand".

Cannibalization: Extension products can "cannibalize" the existing products of the brand when there are positioned in a same or very close market. Aaker (2004) emphasize that these good sales figures for the extensions cannot pay off the harm produced to the original brand's equity. However, this situation is much better than seeing this happening to a competitor's brand, indeed.

Taylor (2004) also touched this subject and agreed Aaker saying that this situation can occur when a variety of extensions are "brand clones" and so they cannot be enough distinguish from the existing products. He gives the example of Crest brand which has been launching new toothpaste twists –e.g. gum protection and whitening, tartar control for years. Then, market share fell from 50% with one product to 25% with 50 products. That was because people desired a successful "all-in-one" version, such as Colgate Total. Therefore, "each introduction competed for the same usage occasion and introduced novelty value but not enough added values to create incremental growth." (Taylor, 2004).

A "disaster" can occur: Aaker (2004) says a "disaster", which cannot be controlled by the firm, can happen to any brand. The more extend the brand, more vital the damages will occur. For instance, 5000 Audi cars were suspected to have sudden-acceleration problem. Unpleasant promotion started to appear from 1978 and continue to the extent that it was mentioned on CBS's "60 minutes" (a TV show

upon cars and their performance) in November 1986. Audi did not make any attempts to change this situation and as a consequence sales dropped from 74000 in 1985 to 23000 in 1989. Fifteen years required Audi to recover and prove Audi cars were in fact good cars (Aaker, 2004).

3.4 Concepts for Evaluating Brand Extensions

In recent literature, many studies have been conducted in terms of brand extension evaluations. Taking the milestone study of Aaker and Keller (1990) as a starting point, researchers have been analyzing different concepts for brand extension evaluation. However, these studies build into that conclusion:

A brand can be leveraged by brand extensions. An extension strategy can have two benefits: (1) if the parent brand is known, extension is easier accepted and (2) extension can increase parent brand awareness and positive attitudes. The success or failure of an extension strategy highly depends on consumers' evaluation. In general, if the perceived similarity between the parent brand and the extension is high, so is the acceptance of extension. This "fit" can be based on both associations of the extension product category and the consistency of the extension with the parent brand concept. This, sequentially, depends on the structure of customers' the evaluation process.

3.4.1 Extension reaction

A landmark study in brand extensions concept belongs to Aaker and Keller as they conducted a study in 1990 observing how consumers evaluate brand extensions. They suggest the hypothesis saying that the brand extensions' evaluations are based on the original brand quality, the similarity and interaction between the parent and extension categories (Bottomley and Holden, 2001). Even though that study does not provide any evidence of a direct relation between the parent brand quality and brand extension evaluation (Aaker and Keller, 1990), the empirical generalizability of Aaker and Keller's (1990) model is supported in Bottomley and Holden's (2001) secondary analysis, which checks up seven replication studies. According to their results, Bottomley and Holden (2001) reached three conclusions: (1) The parent brand quality, the similarity between the parent brand and the extension are the key determinants of customers' brand extension evaluation; (2) Consumers' brand

extension evaluations are also determined by (a) the aspects of fit (such as complementarity and transferability of assets and skills) between the parent brand and the extension, and (b) to what extent consumers perceive the brand extension is difficult to produce; (3) Cultural differences affect how brand extensions are evaluated regarding relative measurement factors.

3.4.2 Spillover and substitution effects

While Aaker and Keller (1990) and the other replication studies present a basis for pulling parent brand equity through brand extensions, Balachander and Ghose (2003) examine the “reciprocal” effect on the parent brand. This effect is measured by “brand-choice flexibility”, which measure the raise in preference likelihood that results from increase in exposure. However, this reciprocal spillover effect does not seem to be regular so that forward spillover effects from publicity of a parent brand on choice of a brand extension are limited (Balachander and Ghose, 2003).

3.4.3 Categorical evaluation processes

In order to understand consumers’ evaluation of brand extensions, categorization theory may help a lot. This theory seeks to how the consumers form categories and how allocates certain items to one category rather than another. Mervis and Rosch (1981) state that “a category exists whenever two or more distinguishable objects are treated equivalently”. According to Loken and John (1993), a brand extension is launched by introducing new characteristics or beliefs in addition to the existing family or parent brand image. If these characteristics or beliefs are reliable with the family or parent brand image, extension is considered to be acceptable or perceived to “fit” the category (Boush and Loken, 1991).

Besides, Boush and Loken mentioned a concept to form attitudes towards brand extensions, which is called “piecemeal”, “analytical” or “computational” processing, where attitude is “computed” from specific brand extension attributes. This model does not seek to illustrate aware evaluation processes (Boush and Loken, 1991).

Fiske and Pavelchak (1986) also proposed a two-step process of evaluation. In the first step, the consumer efforts to match brand extension with the current category. If the match is done and so categorization is found be successful, the influence that is associated with the category type is passed on to the brand extension and so the

evaluation process is complete. In case of a poor match, “piecemeal” processes begin and the affect is evaluated through a weighted permutation of attributes.

In case of an inconsistent brand extension, there exists a negative impact on the parent brand by “diluting” specific attribute beliefs that consumers have for an successful brand name, rather than “diluting” the global affect associated with the successful brand name (Loken and John, 1993). Thus, brand dilution is an important issue to consider while launching new brand or category extensions.

3.4.4 Brand-specific associations

Broniarczyk and Alba (1994) define brand-specific association as an attribute or benefit that distinguishes a brand from the other brands. This means that a brand can be associated with a salient attribute, but this association is not strongly associated with the rivals or the product class as a whole.

Three conclusions can be derived from their research: (1) A perceived lack of similarity between the parent brand’s product category and the projected extension category can be defeat if key parent brand associations are salient and related in the extension category; (2) brand-specific associations allocate to dissimilar product categories. Brand-specific associations interact the role of product category similarity in brand extension judgments; a brand extension is more preferred in an dissimilar category that valued its association than in a similar category that does not value its associations; and (3) the limitations for the suitability of a certain brand extension were determined by knowledge about the existing brand (Broniarczyk and Alba, 1994).

4. CONSUMER EVALUATIONS OF BRAND EXTENSIONS

Keller and Aaker (1992) define brand extension as “use of an established brand name to enter new product categories or classes”. The past fifteen years have witnessed the development of an important body of empirical evidence on consumer attitude in respect of brand extensions.

Two studies that were conducted by Boush et al. (1987) and Aaker, and Keller (1990) respectively initiated systematic research on consumer behavior towards brand extension. While the research of Aaker and Keller (1990) has always been showed as the landmark study of the field, many replication studies followed them (e.g. Park, Milberg, and Lawson, 1991; Boush and Loken, 1991; Loken and John, 1993; Broniarczyk and Alba, 1994; Dacin and Smith, 1994; Bottomley and Holden, 2001; Klink and Smith, 2001; Balachander and Ghose, 2003; Tang, Liou and Peng, 2008). Brand extension research findings have also been extensively treated from an applied managerial perspective (e.g. Keller, 1998).

4.1 The Landmark Study of Aaker and Keller

Leveraging existing brand equity into new product categories attempts to avoid the risk associated with establishing a new brand, through convincing consumers that the positive attributes associated with the original brand are relevant to the new product and/or simply benefiting from the awareness of the original brand. Aaker and Keller (1990) proposed an attitude-based brand extension model where factors influencing the success of the extension were: the attitude toward the original brand (labeled as QUALITY), fit between the original and extension product classes and perceived difficulty of making the extension (labeled as DIFFICULTY). Aaker and Keller also defined three dimensions of ‘fit’ as: the extent to which consumers view two product classes as complements (labeled as COMPLEMENT), the extent to which consumers view two product classes as substitutes (labeled as SUBSTITUTE) and how consumers view relationships (design or making) in product manufacture (labeled as TRANSFER). Finally, the dependent variable was “the attitude toward the extension,

operationalized by the average of the perceived quality of the extension and the likelihood of trying the extension measures”.

Aaker and Keller (1990) hypothesized that “the consumer’s attitude towards the brand extension is a positive function of the quality of parent brand, the fit between the parent’s brand category and the extension category (measured in terms of the transferability of skills and expertise from one category to the other and the complementarity and substitutability of one category and the other), the interactions of quality with three fit variables, and the degree of difficulty in designing and making a product in the extension category”.

Formally, the following model was tested (4.1):

$$Y = \alpha + \beta_1 Q + \beta_2 T + \beta_3 C + \beta_4 S + \beta_5 QT + \beta_6 QC + \beta_7 QS + \beta_8 D + \varepsilon \quad (4.1)$$

where the independent variables are Q = Quality, T = Transfer, C = Complement, S = Substitute, D = Difficult, α = Intercept and ε = Error term.

The dependent variable Y was the *consumers’ evaluation* of brand extension that was measured with two variables: the perceived overall quality of extension and the likelihood of purchasing the extension. Average of these two variables was used to represent the consumer’s evaluation of extension.

4.2 An Overview of Replication Studies

Perhaps, Aaker and Keller (1990) initiated the first systematic research on consumer behavior towards brand extension. Their exploratory research provided valuable insight into which extension constructs influence the attitude of consumers towards the extended brand. Since, research on the field has followed the seminal work around the world (e.g. Sunde and Brodie (1993) in New Zealand; Nijssen and Hartman (1994) in Netherlands; Bottomley and Doyle (1996) in UK; Van Riel et al. (2001) in the Netherlands, Patro and Jaiswal (2003) in India).

Despite the wide acceptance and diffusion of Aaker and Keller’s (1990) findings, almost all the replications gave varying results and thus questioning the empirical generalizability of Aaker and Keller’s original findings. Aaker and Keller’s (1990) exploratory study utilized qualitative, correlational and experimental research methods using data from consumer (student) evaluations of brand extensions. The

initial replication by Sunde and Brodie yielded different results to the original Aaker and Keller study. Further replications by Nijssen and Hartman and Bottomley and Doyle have also yielded different results. A summary of their results is presented in Table 4.1.

Table 4.1: Overview of Aaker and Keller’s study and selected replication studies

Authors	Hypotheses	Results
Aaker and Keller (1990)	H1	Failed to support
	H2	Supported
	H3	Supported
	H4	Supported
Sunde and Brodie (1993)	H1	Supported
	H2	Failed to support
	H3	Supported
	H4	Failed to support
Nijssen and Hartman (1994)	H1	Supported
	H2	Supported
	H3	Supported
	H4	Failed to support
Bottomley and Doyle (1996)	H1	Supported
	H2	Weakly supported
	H3	Supported
	H4	Failed to support
Van Riel et al. (2001)	H1	Supported
	H2	Supported
	H3	Supported
	H4	Supported
Patro and Jaiswal (2003)	H1	Supported
	H2	Partially supported
	H3	Supported
	H4	Failed to support

Aaker and Keller’s (1990) hypotheses; (H1) Higher quality perceptions towards the original brand (i.e. higher QUALITY) are associated with more favorable attitudes towards the extension; (H2) The transfer of a brand’s perceived quality is enhanced when the two product classes in some way fit together. When the fit is weak, the transfer is inhibited; (H3) The fit between the two involved product classes has a direct positive association with the attitude towards the extension; (H4) The relationship between the difficulty of making the product class of the extension, DIFFICULT, and the attitude towards the extension is positive.

Table 4.1 shows that (a) Aaker and Keller fail to support hypothesis 1, whereas all the replications support the positive effect of perceived quality of the original brand; (b) while Aaker and Keller support hypothesis 4, all the replications fail to support

the effect of DIFFICULT on extension attitudes; (c) both Aaker and Keller and Nijssen and Hartman support hypothesis 2, while Sunde and Brodie and Bottomley and Doyle provide weak or no support; and finally (d) all agree on support for hypothesis 3; however there is disagreement on which of the three fit variables are significant. Both in the original study of Aaker and Keller and in the subsequent replications, single-item scales were used to measure the variables. However, in the limitation section of their study, Bottomley and Doyle (1996) noted that “the development of an multiple item scale to measure consumers’ attitude towards the extension may prove beneficial because of the relatively low correlation found between the perceived likelihood of trial and the perceived quality of the extension in the study”. Patro and Jaiswal (2003) also noted that, “one of the limitations of the present study and subsequent replications, we have used single item scales to measure the attitude and the perceived fit dimensions’.

Aaker and Keller’s original study and all the replications have been based on student samples with three of the four studies using similar products, brands and extensions. The many noticeably different statistical findings in the replication studies lead to a need for more empirically grounded research which would be generalizable as a basis for marketing strategy decisions.

4.3 Model Specification

As this study is a broad replication, the original model of Aaker and Keller (1990) is adapted in order to be consistent with the scope of the study. The dependent variable is the overall attitude towards the B2C brand extension. It is predicted that perceived quality, perceived fit and perceived difficulty variables influence brand extension evaluation (see Figure 4.1). The above discussion suggests a number of hypotheses concerning consumer brand extension judgment. First, the underlying assumptions of the proposed research are discussed, and then hypotheses are developed to test the direct and interaction effects of the variables on consumer extension evaluations. While the first four hypotheses were developed from the Aaker and Keller’s (1990) study and its replications, following hypothesizes H5, H6 and H7 are related to Keller and Aaker’s (1997) another study “Managing the corporate brand: the effect of corporate marketing activity on consumer evaluations of brand extensions”

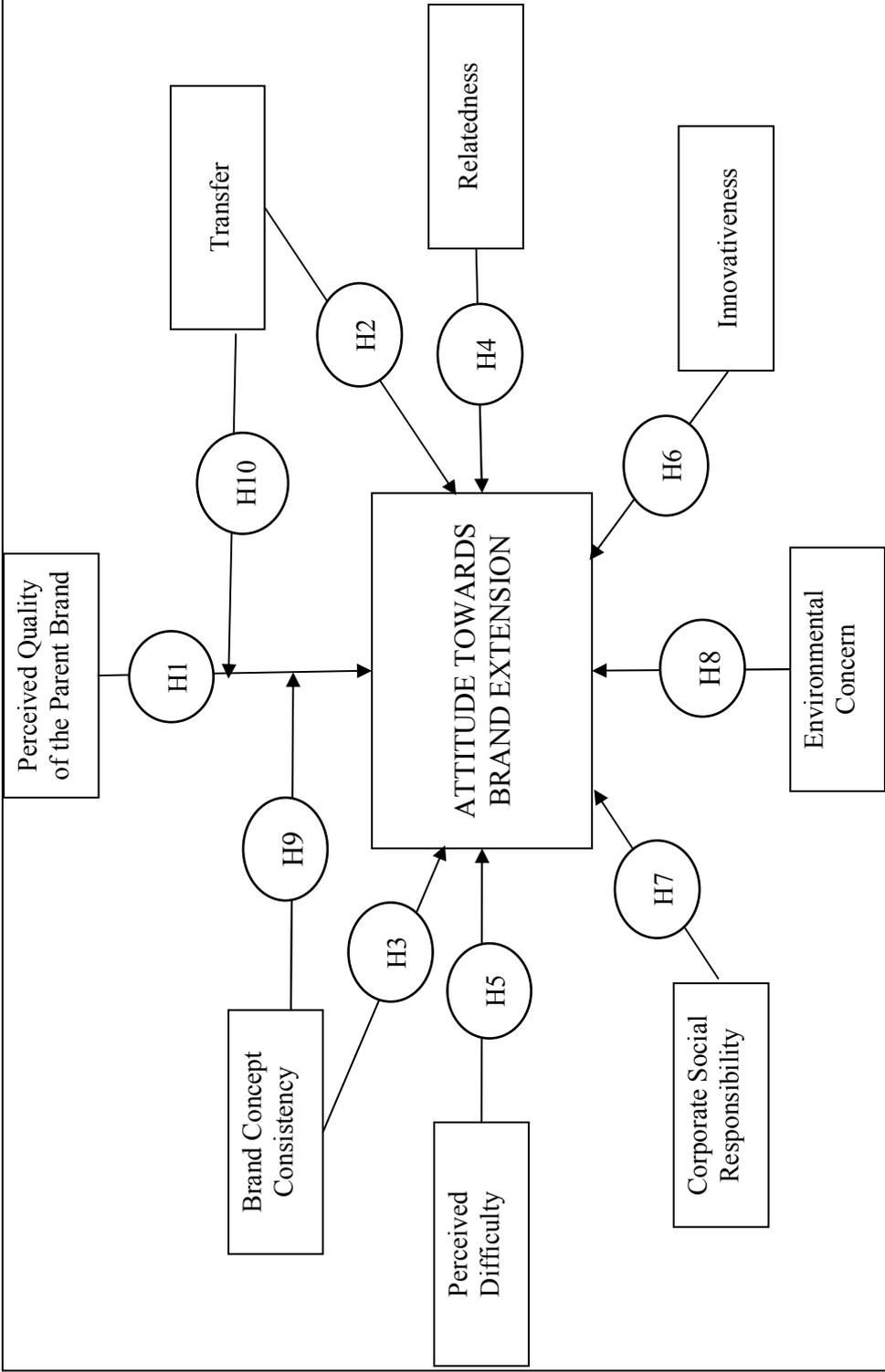


Figure 4.1: Proposed Research Model

4.3.1 Perceived quality of parent brand

Zeithaml (1988) defines perceived quality as a global assessment of a consumer's judgment about the superiority or excellence of a product. She concludes that perceived quality is at a higher level of abstraction than a specific attribute of a product. The impact of perceived quality on the attitude towards the extension should be unambiguously positive. If the brand is associated with high quality, the extension should benefit; if it is associated with inferior quality, the extension should be harmed (Aaker and Keller, 1990; Boush and Loken, 1991).

Besides, previous research on consumer evaluations of brand extension (except for Aaker and Keller's study) shows that consumers' brand extension evaluation largely depends on the perceived quality judgment of the original brand. Once the product is activated as a category, the consumer will immediately infer cognitive judgments associated with the product. If the product is associated with high-perceived quality, the consumer's memory rehearsal about the new brand will centre on pleasant thoughts in relation with his expected value. As one's perceptions of quality towards the original brand increase, a consumer's trust of the new brand and satisfaction will also increase. Therefore, the hypothesis is:

H1: Higher quality perceptions toward the B2B parent brand are associated with more favorable attitudes toward the consumer brand extension.

4.3.2 Perceived fit

A brand extension in a new product category is viewed as a new instance that can be more or less similar to the brand and its existing products. The number of shared associations between the extension product category and the brand characterizes perceived fit. TRANSFER is the first dimension of "fit" and according to Aaker and Keller (1990) it pertains not to how consumers view relationships in product usage, but how consumers view relationships in product manufacturing. Specifically, TRANSFER reflects the perceived ability of any firm operating in the first product class to make a product in the second product class. It is important whether the consumers feel that the people, facilities, and skills a firm uses to make the original product would "transfer" and be employed effectively in designing and making the product extension or not. If not, the perceived quality of the brand or beliefs about the brand in the original product class may not transfer to the extension. In fact, if a

firm appears to be stretching excessively beyond its area of competence, negative reactions might be stimulated and lead to negative associations (Aaker and Keller, 1990).

Likewise, according to Boush and Loken (1991) that influence associated with the parent brand is transferred to the extension when the similarity between two products is high. In conclusion, if consumers see a “fit” between the brand and extended product, their quality perception will be transferred to the extension. Thus, the second hypothesis is:

H2: The transfer of B2B parent brand’s perceived quality is enhanced when the product classes fit together. When the fit is weak, then the transfer is inhibited.

According to Aaker and Keller (1990), two other dimensions of “fit” are COMPLEMENT and SUBSTITUTE. If the parent brand product and the extended product can be consumed or used jointly, then they “complement” each other. Conversely, if the extended product can be used instead of the parent brand product, this time they “substitute” each other. However, Bottomley and Holden state that only a few brand extensions represent true substitutes.

On the other hand, as B2B extension through B2C market can be accepted as extra-sectoral movement, it is not possible for the brand extension to substitute or complement the original brand, since the customers of parent B2B brand and extended consumer brand are different. Hence, SUBSTITUTE dimension will be omitted and COMPLEMENT dimension will be modified.

Broniarczyk and Alba (1994) propose an alternative measure for complementarity saying that, consumer do not only evaluate the brand extension based on the perceived product category fit, but that their assessment are driven primarily by the associations of the brand. In other words, if consumer perceives a brand extension to be relevant with the original brand concept, the attitude towards the extension will be positive. Park et al. (1991) also reveal that when consumers evaluate a brand extension, they not only take into account information about the product feature similarity, but also the concept *consistency* between the brand concept and the extension. The brand concept consistency is more non-product-related, and is more about the brand image than the physical features. The more that consumers think the

extension is consistent with the parent brand concept or image, the more favorable consumer attitudes are toward the extension. Thus those extensions, which are very different from the parent product category physically, can also be perceived as fitting with the parent brand, as long as they have consistent images and concepts with the parent brand. For example, in Park et al.'s (1991) experiment, they found that rings could be a good extension for Rolex but a bad extension for Timex, even if these two brands have the same parent product — watches. This was because rings were consistent with the “luxury and high status” image. Then the third hypothesis is:

H3: If the brand associations of the consumer brand extension are consistent with brand concept of B2B parent brand, the attitude toward the brand extension is positive.

“Relatedness” is another word used to describe the “fit” between the extension product and the original brand. Herr, Farquhar and Fazio (1996) define it as “the strength of the association between the brand’s parent category and the target extension category”. The consumer attitudes transference is more likely to occur on extensions, which are closely related to the parent categories (Herr et al., 1996).

They again indicate that relatedness is a similar concept to “similarity”. It depends on the similarity of common features, complementarities in a common-usage situation, and substitutability in providing a common function (Farquhar et al., 1990; Herr et al., 1996). However, they (1996) also point out that “relatedness” is a more inclusive construct than “similarity”. The notion of “similarity” only refers to the common physical features between the original product category and the extension category. It does not accommodate the notion of “conceptual coherence”. That is, sometimes two product categories are perceived to be related to each other conceptually but not physically. For example, CD players and digital cameras can be seen as related to each other, even though they have very different physical attributes. Thus, Herr et al. (1996) conclude that “relatedness” offers a broader view of “similarity”. Therefore the fourth hypothesis is:

H4: If the brand associations of the consumer brand extension are related to the existing products of B2B parent brand, the attitude toward the brand extension is positive.

4.3.3 Perceived difficulty of making the extension

Another factor that may affect consumer evaluations of a brand extension defined by Aaker and Keller (1990) is the perceived difficulty in designing or making the extension product, termed DIFFICULT. When consumers perceive the extended product class to be “trivial” or very easy to make (i.e., DIFFICULT is low), a potential incongruity occurs. The consumers may view the combination of a quality brand and a trivial product class as inconsistent or even exploitative. The incongruity itself may trigger a rejection or it might lead to a judgment that the quality name will add a price higher than is justified and necessary for such a product. It implies that firms should avoid extending quality brands to trivial product classes for fear that the extension is perceived as incongruous (Aaker and Keller, 1990). Then, the fifth hypothesis accordingly is:

H5: The relationship between the difficulty of making the consumer product class of the brand extension, DIFFICULT, and the attitude toward brand extension is positive.

4.3.4 Corporate brand extensions

In order to capitalize on brand equity, companies are stretching their corporate brand into new and unrelated areas more and more.

“Many great brands are like amoebae or plasticine. They can be shaped twisted and turned in all sorts of ways and still remain recognizable. That's why so many brands can be divorced from the products/services with which they were originally associated” (Olins, 2003).

In this quotation above, Wally Olins points out one of the most crucial strategic issues related to corporate branding strategy: brand extension. As the brand value optimization is getting more focus, companies must consider how to create value across more activities, markets and product categories. Thus, a lot of companies are working on stretching or extending their brand into unrelated business areas (Schultz et al., 2005).

In their study, Keller and Aaker (1997) observed how various types of corporate marketing activities would affect corporate credibility and hence how they have a positive influence on evaluation of brand extension. They presented four fictitious corporate

brand extensions outside the current brand offerings, and corporate descriptions that focused on one of the following three kinds of attributes: (1) Reputation of a firm for being *innovative* and launching technologically advanced products; (2) a firm's strategy of offering *environmentally friendly* products and manufacturing environmentally safe; and (3) a firm's *corporate social responsibility*.

The findings of this study show that corporate marketing attempts can be useful as they improve perceptions and evaluations. Building a good corporate image and managing an outstanding corporate brand strategy help new product acceptance (Keller and Aaker, 1997). As aforementioned above, three brand attributes are categorized as *innovativeness*, *corporate social responsibility* and *environmental concern*.

4.3.4.1 Perceived innovativeness of parent brand

An innovative brand image involves being perceived as being modern and up-to-date, investing in research and development, utilizing state-of-the-art manufacturing technologies, and introducing the latest product features (Keller, 2003). Although brand innovativeness is an important attribute, only a little study has been conducted in this area. Indeed, studies about marketing innovativeness have been in the area of consumer innovativeness and the innovation diffusion (Roerich, 2004). An important point to make is that although innovative brand attributes is favorable for building brand equity, the extent to which this is successful also depends on how “innovative” the target audience is.

Marketing activities underlining innovation have a major impact on the evaluation of corporate brand extension as it leads to the positive corporate expertise perception and to beliefs that the corporate brand extension will also be innovative (Keller and Aaker, 1997). Underlining the innovativeness is an important marketing activity that improves the perceived similarity of customer through the brand extension. Thus, emphasizing innovation in marketing attempts considerably enhances both perceived quality and likelihood of purchasing for the brand extension. Therefore, the sixth hypothesis is:

H6: Higher perceptions of innovativeness toward the B2B parent brand are associated with more favorable attitudes toward the consumer brand extension.

4.3.4.2 Corporate social responsibility of parent brand

Corporate social responsibility (CSR) has been distracting attention in recent years. According to Kitchen (2003) companies unquestionably have responsibilities for their community and these responsibilities must be elucidated and adjusted with the core businesses. As these responsibilities are affairs and promises, CSR is eventually a function of the brand. Thus, Kitchen (2003) defines CSR as:

“The brand-specific duties and resultant actions of commercial organizations in relation to their communities of need – defined and delivered outside the core transactional context of the business”

Similar to Kitchen, Keller and Aaker (1997) also define CSR as “a firm’s philosophy to improve the quality of life in local communities through various activities and programs”. They state that marketing efforts towards environmental awareness and community involvement increase the perceived likeability and trustworthiness, however has no significant effect on the extension evaluation. Then the seventh hypothesis is:

H7: Perceptions of CSR of the parent B2B brand has no effect on the attitudes toward the consumer brand extension.

4.3.4.3 Parent brand environmental concern

Keller and Aaker (1997) define environmental concern as “a firm’s policy to sell “environmentally friendly” products and to manufacture products in an environmentally safe fashion”. Corporate marketing attempts that highlight environmental concern can improve the perceptions of corporate credibility, showing that the corporate brand extension has environmental responsibility. Marketing efforts emphasizing environmental concern has only a modest impact on extension evaluation leading to the eighth hypothesis (Keller and Aaker, 1997):

H8: Perceptions of environmental concern of the parent B2B brand has no effect on the attitudes toward the consumer brand extension

4.3.5 Interaction factors

Other than direct effects of factors influencing the attitude toward the brand extensions, Aaker and Keller (1990) also found that the perceptions toward the

parent brand and the fit between the parent and extension product classes had an interactive effect on the final evaluations of a brand extension as well.

The fit between the parent B2B brand and the new B2C extension classes might also have a positive effect on the attitude toward brand extensions. Tang et al. (2008) considered the interaction effect with the factor of brand concept consistency, as a complementary or substitutive relationship between the parent product and the extension categories is not applicable in the B2B-to-B2C extension. In addition, they examined the interaction between transferring skills and assets from B2B-to-B2C products and the perceived quality during the transfer. Since the current study is also based on B2B-to-B2C extension, in order to create a chance to make a comparison with, following hypotheses developed by Tang et al. will be examined as well:

H9: The interaction effects of perceived brand quality and brand concept consistency between the parent B2B brand and the B2C extension will influence consumers' evaluation on the perceived quality of the parent brand and the B2C extension product.

H10: The interaction effects of perceived brand quality and the perceived transferability of the parent B2B brand to effectively employ its skills and assets in designing and producing the B2C extension will influence consumer's evaluation on the perceived quality of the parent brand and the B2C extension product.

The above two interaction effects state that consumers' evaluations of the perceived quality will be affected by the brand concept consistency between the parent B2B brand (H9) and the B2C extension or perceived transferability of the parent B2B brand to effectively employ its skills and assets in designing and producing the B2C extension (H10). These two hypotheses describe the interaction effects.

4.3.6 Proposed model

Aaker and Keller (1990) and subsequent studies conducted the hypotheses by means of a linear regression model. However, as the model in its original state is mostly useful for consumer brand extensions, for the current context it is to be modified. First, as aforementioned before, independent variables *Substitute* and *Complement* will be omitted and replaced by the new variables *Brand Concept Consistency* (H3)

and *Relatedness* (H4). Hence, there will be three “fit” variables, which are *Transfer*, *Brand Concept Consistency* and *Relatedness*. Second, three independent variables, *Innovativeness*, *Corporate Social Responsibility* and *Environmental Concern* corresponding to H6, H7 and H8 respectively will be added. When *Quality* and *Different* variables will remain the same, this gives the following model (4.2):

$$Y^* = \alpha + \beta_1 Q + \beta_2 T + \beta_3 B + \beta_4 R + \beta_5 D + \beta_6 I + \beta_7 C + \beta_8 E + \varepsilon \quad (4.2)$$

where the dependent variable Y^* = attitude towards the brand extension

and where the independent variables

Q = Quality, T = Transfer, B = Brand Concept Consistency, R= Relatedness, D=Difficult, I = Innovativeness, C = CSR, E = Environment, α =Intercept and ε = Error term.

Lastly, there might be some interaction effects. The first interaction effect is between *Quality* and *Brand Concept Consistency*, and the second interaction term is between *Quality* and *Transferability*, corresponding to H9 and H10 respectively. This leads to:

$$Y^{**} = \alpha + \beta_1 Q + \beta_2 T + \beta_3 B + \beta_4 R + \beta_5 D + \beta_6 I + \beta_7 C + \beta_8 E + \beta_9 QB + \beta_{10} QT + \varepsilon \quad (4.3)$$

where the additional interaction terms

QB = Quality * Brand Concept Consistency

QT = Quality * Transfer

5. A FIELD STUDY ON CONSUMER EVALUATIONS OF THE B2B BRANDS' EXTENSIONS INTO B2C MARKETS

According to Klink and Smith (2001), it is crucial to understand how the brand extensions are evaluated by consumers, in order to determine whether a brand extension is able to capitalize on its parent brand whilst avoiding or minimizing potential disadvantages; because the success of a brand extension is largely determined by how customers evaluate the extension. As it was mentioned in the previous chapters, numerous academic studies on the consumer evaluations of brand extensions have been made in B2C-to-B2C context. However, the current study is investigating the issue of brand extension evaluation in a different context, namely B2B-to-B2C context, and two studies were conducted to obtain insights on how consumers form attitudes toward brand extensions.

In particular, the following research questions were addressed: (1) Can useful qualitative insights into consumer evaluations of B2B-to-B2C brand extensions be gained by exploring reactions to the certain B2B brands and extensions?, (2) What kinds of beliefs about the original brand will consumers associate with the brand extension and in what ways will those beliefs affect the extension attitude?, (3) Is the brand extension model of Aaker and Keller (1990) generalizable in the current context, (4) How will consumers' perceptions of the overall quality of the original brand affect their evaluations of an extension, (5) What is the role of consumers' perceptions of the "fit" between the original and the new product class? How should fit be conceptualized and measured?, (6) Will other aspects of the extension context, such as how difficult the extension is to make, affect consumer evaluations?

This exploratory research consisted of two studies. In *Study 1*, the qualitative phase, respondents provided a set of open-ended associations with the brand name and each of 10 extensions, so that the reactions to each extension, involving four well-known B2B brand names, were obtained. A second study, *Study 2*, examined feasibility of the modified model of Aaker and Keller (1990) with the current context.

5.1 Methodology

Even though previous similar studies generally only depend on quantitative research, this project includes both qualitative part and quantitative parts, as it was aimed to analyze B2B-to-B2C extension process. In the absence of definite concepts in this context, an exploratory study was conducted in order to take a holistic look at the objects and to gather as much information about the objects as possible.

Therefore, as the beginning step, a qualitative exploratory study, Study 1, was undertaken and five mini focus groups, which were different in terms of age and educational levels, were run, each comprising a sample of five people. Focus group research was conducted mainly to get insights into the consumers' brand extension evaluation and a general picture of the concept.

Once the determining factors were defined, descriptive research, involving the survey and the correlation study, was conducted to investigate the extent of the relationship between variables. Hence, Study 2, the quantitative phase, tried to formally assess the consumer's evaluation of brand extensions through measuring attitude for different variables. In other words, hypotheses 1 to 10 were operationalized through a new model adapted from Aaker and Keller (1990) and other theories already discussed.

5.2 Motivation of the Research

Webster and Keller (2004) counts the world's most powerful B2B brands as ABB, Caterpillar, Cisco, DuPont, FedEx, GE, Hewlett Packard, Intel and Boeing. It is also obvious that there are some strong companies such as Deloitte, PricewaterhouseCoopers, Ernst and Young, AC Nielsen serving in B2B market (Webster and Keller, 2004). Since the current study aims to analyze B2B brand extensions into the B2C markets, it was necessary to select some among all these valuable B2B brands. In order to observe whether there are some differences between service and product brand categories, it was decided to set four brands as two distinct product brands carrying minimum service features and two distinct service brands carrying minimum product features. Therefore, four B2B brands were chosen considering the criteria of Aaker and Keller (1990). In their landmark study, while setting fictitious brand extensions, Aaker and Keller (1990) selected the

original brands on the criteria of being relevant to the respondents, generally perceived as high quality, being able to elicit relatively specific associations, not having been broadly extended before. Aaker and Keller (1990) also stated that the use of low quality brands would have tended to generate extensions that would be less realistic.

Table 5.1: Overview of B2B brands and hypothetical B2C extensions

Original Brand	Original Product / Service	Hypothetical Extension
Boeing	Commercial jetliners, military aircraft, satellites, missile defense, human space flight, and launch systems and services	Digital wristwatch, flight simulation computer game and travel luggage
Intel	Advanced integrated digital technology products, primarily integrated circuits, microprocessors, chipsets, wired and wireless connectivity, motherboards	Mp3 player, notebook and LCD TV
Deloitte	Audit, consulting, financial advisory, risk management, and tax services	Finance Academy and finance books
Ernst and Young	Assurance, tax, transaction and advisory services	Accounting Academy and account books

Source: reuters.com and concerned company web-sites.

Therefore, certain sector leaders, perceived as high quality brands, were chosen for the purposes of this study, considering the aforementioned criteria of Aaker and Keller (1990). These brands can be presented as follows with their own statements given on their websites about their positions in the respective markets: GE (“the hugest industrial goods and services conglomerate”), Intel (“the world leader in silicon innovation, processor technologies”), BASF (“world’s leading chemical company”), Boeing (“largest global aircraft manufacturer”), IBM (“world’s largest computer company and systems integrator”), Merrill Lynch (“world’s leading financial management and advisory company”), Ernst & Young and Deloitte (“two of ‘four big auditors’ - international accountancy and professional services firms”).

Though they are the biggest players in their sectors, just because they have penetrated into various sectors, GE and BASF were not appropriate brands according to Aaker and Keller’s (1990) criteria, saying the brand should not have been broadly extended before. Furthermore, Merrill Lynch entered the Turkish market only a year ago, so that Turkish consumers might not be very familiar with this firm. Another big

player in technology sector, IBM was not considered in the context of this study since it already has end-user products with the brand Lenovo. Therefore, for the current study, Boeing and Intel were chosen as product brands, and Deloitte and Ernst & Young were chosen as service brands.

After the selection of four B2B brands, next step was to attempt to select product categories for parent brand and the extension. However, the hypothesized brand extensions had to be reasonable, not irrational but also providing heterogeneity on the “fit” measures of the model. To achieve this, some extensions were consciously chosen “barely related” and “barely consistent”, thus allowing variance with respect to the perceived quality of extension. Table 5.1 shows the four selected B2B brands and hypothesized brand extension products.

5.3 Study I- Exploratory Phase

The objective of the qualitative phase of the research was to see what types of associations would emerge from a thought-listing about the original brands and the extensions and thus gain insights about why evaluations were more favorable towards some of the extensions than towards others.

After four B2B brands and concerned brand extensions were set, focus group research was conducted to investigate the determining factors on consumer evaluation against B2B-to-B2C brand extension and to properly select the target group. Based on the feedbacks from mini-focus groups, out of brands chosen, it was aimed to set two well-known brands among the others in order to avoid very long questionnaire used in the quantitative phase.

5.3.1 Focus groups as qualitative research method

Exploring how customers will respond to a new idea is a typical situation that focus group research would be useful. Usually, focus groups are used as means of testing concepts, new products and messages. Focus group is qualitative research, which means that results with percentages, statistical testing or tables are not obtained. Instead, this methodology is less structured than surveys or other quantitative research and tends to be more exploratory as well (Edmund, 1998).

Rather than providing quantifiable responses to a specific question obtained from a large sampling of the population, focus group participants provide a flow of input and interaction related to the topic or group of topics that the group is centered around. While they appear to be less formal than a survey, focus groups provide an important source of information for business decision making. It is important, however, to ensure that people using the results of such a qualitative study understand how to correctly interpret the resulting information (Edmund, 1998).

The results obtained from quantitative research can be generalized to a specific population, because it is based on statistical sampling of the target population. The results of qualitative research, such as focus groups, however, are not quantifiable. They reflect only a small segment of the target market in question. Given the number of focus group participants, results are not necessarily representative of the general population from which participants are recruited and should not be considered as such (Edmund, 1998).

However, what focus groups offer instead is a more in-depth understanding of target's perspectives or opinions than is otherwise obtainable through telephone interviews or mail surveys. Quantitative studies can miss subjective elements in, for example, a purchase maker's decision process. Focus groups, on the other hand, allow researchers to capture subjective comments and evaluate them (Edmund, 1998).

Focus group study also is often used to design the questionnaire for a quantitative survey. The focus group covers general issues on a topic and respondents' comments often help researchers identify pertinent issues that might otherwise be left out of a survey. Hypotheses generated by focus groups frequently lead to further testing using quantitative methods. Alternatively, focus groups can be used to further interpret quantitative research. Research using a single focus group is rare. It is advisable to conduct two or more groups depending on the breadth of the topic. This ensures the best representation of the target market and allows comparisons between different groups (Edmund, 1998; Greenbaum, 1997).

A focus group typically brings together eight to ten qualified people for a face-to-face discussion of a particular topic. Groups over ten participants tend to be somewhat unwieldy; interactions among the participants are less effective and discussions can be hard to control. Variations of this format-such as smaller groups

and groups conducted on the telephone or over the internet-meet specific needs: full groups (a group consists of a discussion of approximately 90 to 120 minutes, led by trained moderator, involving 8 to 10 people who are recruited for the session based on their common demographics, attitudes or buying patterns germane to the topic); mini groups (essentially the same as a full group, except that it generally contains four to six people); telephone groups, (individuals participate in a telephone conference call, wherein they are led by a trained moderator for 30 minutes to two hours. They are recruited according to the same parameters as full and mini groups); etc (Greenbaum, 1997).

In this study, as a pre-test for questionnaire development, three mini group studies were conducted and the results were given.

5.3.2 Advantages of focus group research

Focus groups provide a number of advantages relative to other types of research (Steward et al., 2006):

- Focus groups provide data from a group of people much more quickly and often at less cost than would be the case if each individual were interviewed separately. They can also be assembled on much shorter notice than would be required for a systematic and larger survey. In marketing studies, focus group data analysis often begins immediately after a session ends, yielding preliminary findings quickly.
- Focus groups allow researcher to interact directly with respondents. This provides opportunities for the clarification for responses, for follow up questions, and for probing of responses. Respondents can qualify responses or give contingent answers to questions. In addition, it is possible for the researcher to observe nonverbal responses such as gesture, smiles and so forth, which may carry information that supplements and on occasion even contradicts the verbal response.
- The open response format of a focus group provides an opportunity to obtain large and rich amounts of data in the respondents' own words. The researcher can obtain deeper levels of meaning, make important connections, and identify subtle nuances in expression and meaning.

- Focus groups allow respondents to react to and build on the responses of other group members. This synergistic effect of the group setting may result in the production of data or ideas that might not have been uncovered in individual interviews. Differences of opinion among group members also help researchers identify how and why individuals embrace or reject particular ideas, communications or products.
- Focus groups are very flexible. They can be used to examine a wide range of topics with a variety of individuals and in a variety of settings.
- The results of a focus group are extremely user friendly and easy to understand. Researchers and decision makers can readily understand the verbal responses of most respondents. This is not always the case with more sophisticated survey research that employs complex statistical analysis.

5.3.3 Limitations of focus group research

Although focus groups are valuable research tools and offer a number of advantages, they do have their limitations. Many of these limitations are simply the negative side of the advantages listed above (Steward et al., 2006):

- The small numbers of respondents that participate in even several different focus groups and the convenience nature of most focus group recruiting practices significantly limit generalization to a larger population. Indeed, people who are willing to travel to a location to participate 1-2 hour group discussion may be quite different from the population of interest, at least on some dimension such as compliance or defense.
- The interaction of respondents with one another and with the moderator may have two undesirable effects. First, the responses from members of the group are not independent of one another, which restrict the generalizability of results. Second, a very dominant or opinionated member may bias the results obtained in a focus group. More reserved group members may be hesitant to talk.
- The “live” and immediate nature of the interaction may lead a researcher or decision maker to place greater faith in the findings than is actually warranted. There is a certain credibility attached to the opinions of live and present respondents that is often not present in statistical summaries.

- The open-ended nature of responses obtained in focus groups often makes summarization and interpretation of results difficult.
- The moderator may bias results by knowingly or unknowingly providing cues about what types of responses and answers are desirable or seeking to achieve group consensus on particular topics.

5.3.4 Description of focus groups

As aforementioned before, the main purpose of focus group research was to conduct a pretest for survey design and to eliminate two brands out of four. For this reason, four mini focus group interviews were made. Different educational levels and age ranges were taken into consideration in order to specify the target properly and to determine whether there is a relation between educational level and age ranges, and brand awareness.

- ✓ First mini group was composed of five university students (three male-two female) in the age range of 20-24
- ✓ Second mini group was composed of five (university-graduate) employees (three female-two male) in the age range of 25-30
- ✓ Third mini group was composed of five (high school graduate) employees (three female-two male) in the age range of 25-30
- ✓ Forth mini group was composed of five (university graduate and above) employees (three male-two female) in the age range of 30-40

5.3.5 Findings of focus group research

Open- ended responses were obtained first for the parent B2B brands and then for the set of extensions. Respondents were asked to name the associations that came to their mind when they considered the concerned brand extension. Besides, in order to know much about the original brand image, respondents were asked to assume the parent brands as a person and describe their personalities.

Closed-ended questions were asking to the respondents about the perceived quality of the original brands, perceived innovativeness, environmental concern and corporate social responsibility, perceived quality of the hypothetical extension

products, perceived difficulty in designing and making the product, perceived ability of a competent manufacturer in the original product class to make product extension, perceived consistency and relatedness against brand extension with the original brand products and the likelihood of purchasing the extension. 5- point scales were used for all closed-ended questions. Focus group questionnaire is presented in Appendix A.1 (in Turkish) and A.2 (in English).

5.3.5.1 First group

The first group was composed of five university students (three male-two female) in the age range of 20-24.

Boeing: It was observed that the level of brand awareness was satisfyingly high. All the participants were knowing the brand and had heard of it via TV, magazines and journals. When they were asked *what comes to their mind when they think of Boeing;* they mentioned “plane”, “grandeur”, “durability” and “trust”. When they were asked *if Boeing were a person, what its gender and personality would be;* all the participants told it would be a “male”, three participants told it would be “a fat man with glasses”, one participant said he would be very “calm” and the other said he would be “strong minded”.

About brand extensions; (1) digital wristwatch, (2) flight simulation computer game and (3) travel luggage, participants were asked to explain their associations about these hypothetical products in terms of quality, consistency and difficulty and whether they like the extension idea, they would like to purchase such a product.

- 1- *Digital wristwatch:* Three participants liked the idea and told it would be very complicated and expensive watch. One participant told it could only be a male-watch and one participant totally did not like the idea.
- 2- *Flight simulation computer game:* All the participants agreed that was a good idea. Three participants said it would have a high quality, two participants said it would be very professional and expensive. All the male and one of the female participants would like to buy such a game.
- 3- *Travel luggage:* While two participants said a Boeing luggage would be very durable, hard and heavy, two participants said it would not be very esthetical and well designed. Five participants all agreed that it would be expensive.

Intel: Intel was the most known brand with high-awareness level, all participants seemed to know it and use it indirectly (via their notebooks and PCs). They used words “professional”, “fast” and “small” to identify Intel brand. If Intel was a person, they all agreed it would be “male”; two said he would be a “young geek”, one said he would have “glasses”; three participants said he would be “short”. Besides, Intel made them associate “computer”, “laptop”, “microprocessor” and “Intel Inside”.

- 1- *Mp3 player:* Two participants seemed to like the idea and three disliked. Three participants declared it would not be a user friendly device, and four participants said it would not be esthetical or well-designed when compared to Ipods.
- 2- *Notebook:* All the participants liked the idea. Four participants said it was supposed to be a professional business computer, one said it would be expensive. Besides, three people told it would be light and small.
- 3- *LCD TV:* Three participants did not like the idea and claimed that Intel does not have any similar products or technical knowledge so that this extension is senseless. Two participants liked idea but also declared it would not be as qualified as the other LCD TV brands (such as Sony, Philips etc).

Deloitte: As Deloitte is a B2B service brand, only three (two male-one female) participants were aware of it. However, even the people that have heard of Deloitte could not answer “what do they do” question properly. Hence, gathering the feedbacks and responses was very difficult issue, as a very low awareness level did exist. In conclusions, three people recalled consultancy and only two of them could name finance and tax insurance consultancy; remaining two people did not even know the company.

As brand awareness very low, the rest of the questions related to brand extensions were only asked to three people that were familiar with Deloitte. The others after learning it is a very famous consultancy company, they also made some interpretations about fictitious brand extensions. Three participants used words “boring”, “business man”, “hard working” words in order to describe Deloitte as a human-being.

- 1- *Finance Academy:* Three participants that knew Deloitte found it as interesting and “good idea”, and said it would be very expensive but also beneficial. The

other two participants that were not familiar with the brand before also found it as a “genius idea”.

- 2- *Finance books*: Three participants did not like the idea and claimed that books would not include enough information.

Ernst and Young: Likewise Deloitte, the brand awareness level was very low so that only a little information could be gathered. Again, the same three participants knew the company and remaining two did not. One of them said that Ernst and Young is *taking a back seat* to PricewaterhouseCoopers and Deloitte. Unfortunately, participants did not have information about the system of company only heard of it.

- 1- *Accounting Academy*: Again, participants found it as interesting and good idea. Three participants agreed it would be very expensive.
- 2- *Accounting books*: Two participants liked the idea and one participant did not, saying they would not be very beneficial or full of knowledge.

5.3.5.2 Second group

The second group was composed of five (university-graduated) employees (two male-three female) in the age range of 24-30.

Boeing: Similar with the first group, brand awareness of Boeing was very high. Due to majority of travelers, they all knew about Boeing, and also experienced it indirectly (via airlines). Three participants said that “plane” came to their mind as they think of Boeing; one said “Airbus” and one said “flight”. Five participants agreed if Boeing were a person then it would “male”; two participants associated “business man who travels a lot”, two participants did a “serious” man and one said that he would be very “cool”.

- 1- *Digital wristwatch*: While male participants like the idea of Boeing wristwatch and cited that they would like to try such watch, female participants did not like at all.
- 2- *Flight simulation computer game*: Idea of flight simulation computer game intrigued all the participants and all of them found that idea very “interesting” and “genius”. Four participants said they would like to have that product and also declared it would be very “expensive” and “professional”.

3- *Travel luggage*: Only one participant liked the idea and the rest did not, saying it would be very “huge”, “heavy” and “ugly”. Besides, two participants said it would be “blue”.

Intel: As it was expected, Intel was again the most known brand among the participants; all of them had idea about the brand and experienced it. Three participants mentioned “Intel Inside”, one did “Pentium” and “Core 2 Duo” and one did “processor”. When they were asked to picture Intel as a person, all the participants said it would be “male”, four persons mentioned “fast”, one person said he would be “short” and one said he would be an “engineer”.

1- *Mp3 player*: Only two participants liked the idea. Three persons said if such a product is produced, it would be very “ugly”, “cheap” and “shoddy”.

2- *Notebook*: Three participants liked the idea, and said it would be a “fast” and “expensive” machine for “professional’s”. However, two persons were not fancy of it putting up the argument that Intel does not have such competency and only processor is not enough to produce a computer.

3- *LCD TV*: Only one participant found the idea very interesting and liked. The others said (for Intel) it would be very difficult to produce and design such a product, as Intel does not have such a product, and also added that Intel is much related to IT sector and such an extension “would fail”.

Deloitte: Brand awareness of Deloitte was higher than the first group. All the participants knew Deloitte; three participants associated “consultancy”, one participant did “accounting” and one did “very long working hours”. They pictured Deloitte as a typical serious, finance manager.

1- *Finance Academy*: Four participants liked the idea and declared that they did want to derive benefit from such an education program. One participant told it would be very “expensive” and “not so beneficial”, hence did not like the idea.

2- *Finance books*: While two participants were fancy of this idea, three participants did not. One said, these books may be best-seller but at the same time would be “full of popular tactics” instead of essential information.

Ernst and Young: Unlike Deloitte, the brand awareness level was very low and only three participants were familiar with Ernst and Young. This situation made it very difficult to gather information. Two participants associated “consultancy”, one participant did “finance”.

- 1- *Accounting Academy*: Three participants were fancy of that idea, and said that they would like to attain such educational program. As the other participants had no idea of Ernst and Young, they could not make any comment.
- 2- *Accounting books*: Only one participant liked the idea and the others did not saying they would not be full of information, neither beneficial.

5.3.5.3 Third group

The third group was composed of five non-university graduate (secondary school graduated or high school graduated) employees (three female-two male) in age range of 24-30, working at government office.

Boeing: Even though three participants had no experience of flight, all participants associated “plane” and “flight”, and one person pronounced “technology”. Different and more interesting from the other mini groups, two participants pictured Boeing brand as a “hostess” and said Boeing would be a “tall”, “slim” and “young” “woman”. Other three persons pictured Boeing as a “man” who is “active” and “young”, two said he would be “tall”, “fat” and “calm”, one said he would be “short”.

- 1- *Digital wristwatch*: While four participants said it would be a “low qualified” watch saying that they would never want to try such a product, one said it would be above the average but stayed neuter in terms of likelihood of purchasing.
- 2- *Flight simulation computer game*: All the participants agreed that the quality of this product would be above the average. Four people said it would be very “professional” and “expensive”, one said it would not be as popular as Play Station and Nintendo Wii.
- 3- *Travel luggage*: Three participants said the quality would be average, one supported above the average and one said it would be below the average. Two said it would be “expensive”, two said it would be very “big” and “durable”, one said it would be “blue”.

Intel: Unfortunately, only three participants knew the Intel brand, and others did not even hear of it. In this situation, information was only gathered from that three participants. One participant mentioned “processor”, “Intel Inside”; one did “Windows” and “pentium” and one did “speed”. If Intel were a person, two persons said it would be a “female” and one said “male”. One pronounced “short”, one did “active” and one did “entertaining”.

- 1- *Mp3 player:* Among the people that is familiar with Intel brand, two liked the idea, one person said the product would be not user friendly and as esthetical as Ipods but intended to purchase such a product but stayed neuter against the idea.
- 2- *Notebook:* All three participants liked the idea and seemed likely to purchase such product. Two said it would be “fast”, one said it would be very light.
- 3- *LCD TV:* None of the participant liked the idea, saying that Intel does not have such competency and knowledge to produce. One said it would be “cheap”.

Deloitte: Unfortunately, only two persons knew the brand and associated “consultancy”. Again, only a little information could be gathered because of the low level of brand awareness among the participants. One pictured Deloitte as a “busy” and “harworking” “man” and one pronounced a “man” who is “old”, “tall” and “tired”.

- 1- *Finance Academy:* Only one participant liked the idea, added it would be very expensive.
- 2- *Finance books:* None of the participants liked that idea. They said they would not be very beneficial.

Ernst and Young: Likewise Deloitte, brand awareness level was even less and unfortunately only one person did know the company. Again, he pictured Ernst and Young as a “man” who is “old” and “tired”. Just because only one participant was familiar with that brand, the following questions were only asked to him, and eventually very little information gathered from only one person.

- 1- *Accounting Academy:* He said such academy would be very “expensive” and not everybody could afford it.
- 2- *Accounting books:* He was not fancy of such product saying that their content

would not be richer than the regular finance books.

5.3.5.4 Forth group

The forth group was composed of five (university and above graduated) employees (three male-two female) in age range of 30-40.

Boeing: When participants were asked about the words came to their minds when they think of Boeing, like previous groups, Boeing brand again made them recall “plane”, “big plane” and “America” and for one person “codes like 737, 747”. When they were asked to picture Boeing as a person; all persons pictured it as a “man”, three persons said he would be “tall” and “fat” man who “travels a lot”, one person said he would be “short” and one said he would have “glasses”.

- 1- *Digital wristwatch:* None of the participants liked this idea and they all found it as a “bad idea”. One said that a watch should be esthetic and Boeing watch would not be a “beautiful” watch to wear.
- 2- *Flight simulation computer game:* While female participants were not fond of this idea because they were not familiar with computer games, all the male participants said they would like to try such a product. One said it would be a very “professional” game and one said it would be very “expensive”.
- 3- *Travel luggage:* While two participants (one male-one female) did want to try such as product, the rest did not like the idea. Two persons said it would be very “durable”, two persons said it would be “very big” and one person said it would be “blue” just like sky.

Intel: When they were asked about Intel, two persons associated “computer”, “Pentium”, three persons did “micro processor-micro chip” and one person did “Core-toDuo”. Again all participants agreed Intel would be a “male”, three persons saying he would be “young”, “active” and “entertaining”, and two saying that he would be “short” and “fat”.

- 1- *Mp3 player:* While two persons said it would be average quality product, three said it would be above average. Four participants found this product “very consistent” with the other Intel product; however, one person did not. They all agree that it is not difficult to produce such product. One person was likely to

purchase such product, two persons did not and two persons were neuter.

- 2- *Notebook*: Four persons liked this idea and said such product would be very “fast”, “small” and “expensive” and also declared that Intel could use its own resources and competencies to produce such product. They were likely to purchase such product. One person did not like the idea and said resources and competence of Intel is not enough to produce such product.
- 3- *LCD TV*: Three participants found this product consistent with the other Intel product, one person were neuter and one found it inconsistent. Three participants said its quality would be above the average, while two selected the average. Three persons were neuter in terms of likelihood of purchasing, two were not likely.

Deloitte: Unlike other groups, all of the five participants knew Deloitte and could name “consultancy”, “finance” and “accounting”. As a person, all the participants said it would be “male” and “old”; two persons pictured it as a “boring man”, one “genius man” and two said it would be “hardworking man”.

- 1- *Finance Academy*: Four persons showed high attention to that idea saying and the one was abstaining. Among the people who liked the idea, two said it would be a “beneficial” program and they would like to attain such an academy, one said it would be “certificated” and one said it would be “executive”.
- 2- *Finance book*: Only one person liked the idea and the others seemed to dislike. Two persons said it would be a “best-seller” even though it would not have rich content.

Ernst and Young: Four persons knew the brand and one did not. Two said Deloitte was the leader of the market and Ernst and Young is the follower.

- 1- *Accounting Academy*: Two persons said that Ernst and Young was not capable of doing that. One said it would be beneficial and interesting and two persons stayed neuter.
- 2- *Accounting books*: Again, likewise the previous example, two persons said it would be “bestseller” despite of “poor content”. One person liked the idea and said she would like read such a book, and the others disliked.

5.3.6 Evaluation of focus group findings

The data gathered by focus group research was evaluated in terms of original brand associations and brand extension evaluations.

5.3.6.1 Original brand associations

Table 5.2 summarizes the open-ended associations and the average quality ratings for the original brands. The upper section shows the original brand associations and the lower section lists the characteristics that respondents mentioned when they were asked if the brands were persons, what their gender and personality would be.

Table 5.2: Summary of brand associations for original brands: Number of respondents mentioning item

Boeing	3.88	Intel	3.90	Deloitte	2.71	Ernst and Young	2.52
Plane	16	Computer	10	Consultancy	8	Consultancy	7
Trust	4	Processor	9	Finance	5	Deloitte	1
Grandeur	7	Fast	4	Tax insurance	1	Finance	4
Durability	4	Small	3	Long working hours	1		
Airbus	2	Intel Inside	6	Accounting	2		
Flight Technology America	1 2	Pentium Professional	3				
Male	17	Male	16	Businessman	6	Male	4
Glasses	2	Female	2	Boring	3	Old	4
Calm	5	Young	9	Hard working	3	Tired	1
Fat	8	Short	6	Serious	1		
Hostess	2	Active	4	Old	3		
Young	2	Entertaining	4	Busy	1		
Tall	7	Geek	2				
Short	2	Fat	2				

Numbers in bold are the average quality ratings. Associations and ratings are based on five mini focus groups (composed of five persons in each group)

Two of the brands received high ratings (Boeing and Intel), where as the other two received below the average (Deloitte and Ernst and Young), and these quality assessments are reflected in the stated associations. This situation can be explained with the different levels of brand awareness of the brands.

In focus group analysis, it was observed that the brand awareness and brand knowledge of B2B service brands (Deloitte and Ernst and Young) are significantly low. This situation led to low quality ratings, because only a few people knew those brand but at the same time, they had no experience with the product, and thus

no idea about the actual quality. Besides, it was also discovered that people belong to the high-educated segment were familiar with these brands.

Even though it was aimed to select one product brand and one service brand according to the focus groups, the results pointed that it is very difficult to gather data for B2B brands. It was obvious that the level of brand awareness of Boeing and Intel brands were significantly high when compared to service brands Deloitte and Ernst and Young. Furthermore, when Aaker's criteria (relevance to the respondents, high quality, having a strong brand image, and not having been extended broadly before) are considered, it was required to select well-known brands in case of inappropriate responses related to the lack of knowledge about brand. Therefore, questionnaire was designed to include two product brands (Intel and Boeing) and concerned extensions.

5.3.6.2 Brand extension associations

Another aim of the qualitative phase was to test recommended brand extensions in terms of differentiation. Hypothetical brand extensions had to differ from each other in terms of difficulty, perceived quality, consistency etc. Hence, focus group study showed that there was no need for any revision or changes in extensions.

An examination of low rated extensions can be done under two titles: (1) the fit between the original brand product and the extension product was perceived low, (2) the original brand carried damaging attribute characteristics to the extensions.

One problem with low rated extensions was lack of perceived similarity or consistency between the original and extension product classes. The firm was seen as lacking the ability to make a product. For instance, some subjects reacted to the idea of Boeing manufacturing a digital wristwatch by stating Boeing should stick to aero-technology and had no credibility as a watch. For the same extension, there was a second problem which was the "huge" association of Boeing (n=7). Respondents commented that, Boeing made them think of something big and durable, and watch as an accessory was supposed to be well-designed and esthetic. Thus, Boeing wristwatch made them think of a very ugly watch that no one would ever want to wear.

Table 5.3: Summary of brand associations for brand extensions: Number of respondents mentioning item

Brand Extension		Brand Extension	
Boeing digital wristwatch	2.38	Boeing flight simulation computer game	3.57
Complicated	3	Professional	11
Expensive	3	Expensive	11
Male watch	1	High quality	9
Bad or low quality	4	Genius	5
Would not buy	5		
Boeing travel luggage	3.15	Intel mp3 player	3.13
Durable	8	Would not use	3
Heavy	2	Not user-friendly	5
Ugly / not esthetical	6	Ugly / not esthetical	8
Expensive	7	Cheap	5
Huge	8	Bad or low quality	5
Blue	2		
Intel notebook	3.85	Intel LCD TV	3.38
Professional	7	Senseless	4
Expensive	5	Low quality	4
Light	4	No technical knowledge	9
Small	7	Would not use	7
Fast	9	Cheap	1
Deloitte Finance Academy	3.20	Deloitte finance books	2.12
Good idea	13	Would not buy	13
Expensive	5	Poor content	8
Beneficial	6	Best-seller	3
Ernst and Young acc. books	1.97	Ernst and Young Accounting Academy	2.90
Poor content	2	Good idea	9
Would not buy	9	Expensive	4
Not beneficial	1		
Best-seller	2		

Numbers in bold are the average quality ratings. Associations and ratings are based on four mini focus groups (composed of five persons in each group)

However, there was also challenging results especially for Intel and extensions. Among the chosen B2B brands, Intel was not only the one with highest level of brand awareness, but also with the highest level of perceived quality. That brand image of Intel made subjects to assume Intel could handle any electronic-technology related product.

Table 5.3 summarizes the open-ended associations of 10 brand extensions and Table 5.4 reports the accompanying average ratings.

Table 5.4: Qualitative study means

	Attitude Towards Extension					
	Extension	Quality	Difficulty	Transfer	Relatedness	Consistency
Boeing digital wristwatch	2.38	3.00	1.80	2.88	2.35	2.50
Boeing flight simulation computer game	3.57	3.85	1.45	4.13	4.05	3.95
Boeing travel luggage	3.15	3.50	1.80	2.78	3.36	3.65
Intel mp3 player	3.13	3.45	1.50	3.93	3.35	3.30
Intel notebook	3.85	4.10	1.55	4.20	4.10	4.15
Intel LCD TV	3.38	3.65	2.15	3.43	3.50	2.87
Deloitte Finance Academy	3.20	3.33	3.24	3.50	3.00	3.24
Deloitte finance books	2.12	2.24	1.46	4.34	2.46	3.33
Ernst and Young accounting books	1.97	2.13	1.52	4.22	3.08	4.32
Ernst and Young Accounting Academy	2.90	3.05	3.67	4.12	3.53	3.98

Study means are averages of 20 subjects' (four mini focus groups) perception of the following measures; attitude towards the extension, the average of perceived overall quality of the extension (1=inferior, 5=superior) and likelihood of purchasing the extension (1=not all likely, 5=very likely); QUALITY, the overall of the original brand (1=inferior, 5 superior); DIFFICULT, perceived difficulty in designing and making the extension (1=not at all difficult, 5=difficult); TRANSFER, the usefulness of manufacturing skills and resources in the original product class for making the extension product (1= strongly disagree, 5= strongly agree); RELATEDNESS, the extent to which the consumer perceives extension product to be related with the existing products of parent brand (1=very unrelated, 5=very related); CONSISTENT, the extent to which the consumer perceives the extension to be consistent with the parent brand (1= very inconsistent, 5 = very consistent).

5.4 Study II- Descriptive Phase

Similar with Aaker and Keller's (1990) study and replication studies, quantitative analysis was conducted after qualitative phase. The quantitative part was to assess the consumer's evaluation of brand extensions through measuring attitude for different variables. Since the purpose of this study is to test the generalizability and reproducibility of Aaker and Keller's (1990) study in B2B context, hypotheses 1 to 10 were operationalized through a new model adapted from Aaker and Keller (1990) and other theories discussed before.

To test the hypothesized model, a questionnaire, consisted of various questions on two well-known global B2B brands (Boeing and Intel) and six hypothetical consumer brand extensions was developed. The data collected from the survey were then analyzed using the statistical software application SPSS (Statistical Package for the Social Sciences) and multiple regression analyses were conducted to test the hypothesized model.

5.4.1 Questionnaire development and scales

As it was mentioned in qualitative phase, Boeing and Intel were two product brands picked up among four B2B brands. As a questionnaire was already developed for focus groups, the same questionnaire was used for data collection after adding some questions. The survey used in quantitative phase may be found in Appendix A.3 (in Turkish) and A.4 (in English).

Since it was aimed to analyze the model with two brands, the questionnaire was prepared as two parts (one part for each parent brand), and the same questions were asked to the respondents in the same order. However, in order to get more knowledge about brand awareness levels, an open-ended question "*please name the three brands that comes to your mind when you think of plane/computer*" was placed in each part as a preliminary question. In order to avoid any possible influence from the rest of the survey, that question(s) was asked as one and only question in the first page of each part. Besides, consistent with the focus groups findings, a multiple-choice question, measuring the brand characteristics and image, was created.

Although all authors noted it as the main limitation, both in the original study of Aaker and Keller and in the subsequent replications, single-item scales were used to measure the variables. According to make a comparison, single-item scales were used for all the variables *but* transfer. For transfer dimension, as Likert-scale was used in previous studies, multiple-item scale was developed.

All measurement items of brand extension were taken from previous studies (Aaker and Keller,1990; Broniarczyk and Alba, 1994; Farquhar et al., 1990; Herr et al., 1996; Park et al., 1991; Tang et al, 2008). Although all these studies all used seven-point scales, due to difficulty of naming 7-point-scale in Turkish and also to Turkish people's familiarity to 5 point-scales, 5 point- scales were preferred. Variables and the concerned scales were given below:

- ✓ *Quality perception* (Q) indicates consumer's perception toward the overall quality of each parent brand (ranging from 1 = inferior, 5 = superior), that is, the overall brand attitude (Aaker and Keller,1990; Park et al., 1991; Broniarczyk and Alba, 1994; Tang et al., 2008).
- ✓ The dimension of *transfer* (T) indicates the perceived ability (1 = strongly disagree, 5= strongly agree) of the firm operating in the first product class to another product class (Aaker and Keller,1990; Park et al., 1991; Broniarczyk and Alba, 1994; Tang et al., 2008).
- ✓ *Brand concept consistency* (B) measures the extent to which the consumer perceives the extension to be consistent with the parent brand (1= very inconsistent, 5 = very consistent) (Broniarczyk and Alba, 1994; Park et al., 1991).
- ✓ *Relatedness* (R) shows the strength of the association between the brand's parent category and the target extension category (1=very unrelated, 5=very related) (Farquhar et al., 1990; Herr et al., 1996)
- ✓ *Difficulty* (D) presents the perceived difficulty of making the extension (1 = not at all difficult, 5 = very difficult) (Aaker and Keller,1990; Park et al., 1991; Tang et al., 2008).
- ✓ *Product innovation* (I) denotes the consumer's perception of the parent brand as an innovator in research, design, new technology and services (1= low

innovation, 5= high innovation) (Aaker and Keller,1990; Broniarczyk and Alba, 1994; Tang et al., 2008).

- ✓ *Corporate Social Responsibility (C)* presents the marketing activities directed towards environmental awareness and community involvement (1 = low responsibility, 5=high responsibility) (Tang et al, 2008).
- ✓ *Environmental concern (E)* refers to the consumer’s perceptions of the B2B firm’s environmental concern during the production process and use of material inputs (1 = total neglect of environmental protection, 5 = emphasis on environmental protection) (Aaker and Keller,1990).
- ✓ Finally, *consumers’ evaluation of the brand extension (Y)* is measured with two variables: the perceived overall quality of the extension (1 = inferior, 5 = superior) and the likelihood of purchasing the extension (1 = not at all likely, 5 = very likely). The average of these two variables is used to represent the consumers’ evaluation of the extension (Aaker and Keller,1990; Broniarczyk and Alba, 1994; Tang et al, 2008).

5.4.2 Sampling and response profile

In the original Aaker and Keller (1990) study as well as in most of the replication studies, the samples were drawn from student populations. However, this includes an obvious limitation in terms of the representation of the population and generalization of findings. As it was observed during focus group research, brand awareness levels were in proportion to educational levels and the highly educated people were the ones that have the capability of comprehending questions.

Table 5.5: Sample characteristics

Respondents	Percentage (%)
Number (n=354)	
Female (n=156)	50.5
Male (n=153)	49.5
Age	
under 24 years (n=71)	26
25-29 years (n=96)	35
30-34 years (n=37)	13
35-39 years (n=30)	11
over 40 years (n=42)	15
Mean age (range 20-53)	30

Table 5.5: (contd.) Sample characteristics

Respondents	Percentage (%)
Education	
Primary school graduated (n=1)	0.3
High school graduated (n=30)	9.7
University graduated (n=157)	50.8
Above (n=121)	39.2
Income (monthly household income)	
below 1000 TL (n=9)	2.9
1001-2000 TL (n=58)	18.8
2001-3000 TL (n=72)	23.3
3001-4000 TL (n=41)	13.3
4001-5000 TL (n=44)	14.2
above 5000 TL (n=85)	27.5

Thus, the survey of the current study was distributed to highly educated people both online and via traditional method, and also it was aimed to cover variety in age, gender and income levels.

354 subjects responded on six product extensions, making for a sample size of 1,668. Respondents varied in age between 20 and 53 year-old, 50.5% were male and 49.5% were female, with the average age of 30. Because the research has been conducted to people with high income, unintentionally the results were retrieved from this income level. The sample characteristics are given in Table 5.5 above.

6. ANALYSES AND FINDINGS OF THE STUDY

Analysis of quantitative phase is composed of two parts; in the first part, questions measuring the brand image and brand awareness were evaluated and in the second part regression analyses were conducted and the results were interpreted.

SPSS was used for data analysis. At first, responses of open ended-questions were analyzed and interpreted and then regression analyses were conducted to model the consumer evaluations of brand extensions. In this part, for eliminating the problem of multicollinearity, residual centering approach was used. Then, multiple regression analyses were conducted to test the hypothesized model. In the end, hypotheses were tested and interpretations were made both with the help of qualitative phase findings and open-ended questions' responses.

6.1 Brand Awareness and Brand Image Evaluation

As it is aforementioned before, respondents were asked to answer three questions below, regarding brand awareness and brand image of each brand:

Q1: Please name three brands that come to your mind when you think of "plane/computer" (open-ended question)

Q2: What does brand "Boeing/Intel" make you recall? (open-ended question)

Q3: If Boeing/Intel were a person, what would its gender and personality be? (multiple-choice question)

In this section, responses for each brand are evaluated separately, and a comparison with the focus groups findings is made.

6.1.1 Boeing

When the responses against first question "*Please name three brands that come to your mind when you thing of "plane"*" was analyzed, even though it is not a plane brand but service brand, THY seemed to appear as the first brand associated with the word "plane", and was followed by Boeing (see Table 6.1).

Table 6.1: Summary of responses against (Q1) for Boeing in terms of frequencies

Brand	Frequency	Rank		
		1 st	2 nd	3 rd
THY	354	161	88	105
Boeing	178	115	46	15
Pegasus	141	36	66	39
Airbus	92	9	62	21
Lufthansa	46	10	20	16
Onur Air	36	-	10	26
Atlas	32	3	9	20
British Airways	19	-	8	11

Given numbers are the frequencies

Respondents put THY in the first place 115 times whilst Boeing got first place 161 times. Pegasus, Lufthansa and Airbus were the mostly mentioned brands for the second place, and Onur Air, Atlas and British Airways were the others mostly written as the third brand. This result shows that people are mostly familiar with the service brand (i.e. airlines companies) than with plane manufacturers (i.e. Boeing and Airbus). However, this is not surprising as the current study is dealing with B2B brands, and airlines companies stand in the forefront more than manufacturers.

Q2 was questioning the *associations linked to Boeing brand in respondent's mind*. Reactions indicate that, Boeing brand is mostly associated with “plane”, of course, and then “grandeur” (see Table 6.2). Other statements that were noted were “THY”, “America” and the numbers like “737”, “777” and “747”. While these results are consistent with the focus groups, there was an exception for “accident” association. The effect of the plane accident (THY airlines with a Boeing plane) occurred in Netherland was obvious that 24 people noted “accident”. In addition, as that accident occurred just after the focus groups were conducted, no such association was seen in focus groups. “Others” covers the statements with low frequencies such as “blue”, “bird”, “miles and miles”, “HSBC” and “travelling”.

Table 6.2: Boeing brand associations in terms of frequencies and percentages

Association	Frequency	Percent (%)
Plane	147	41.5
Grandeur	69	19.5
Trust	33	9.3
Accident	24	6.8
THY	22	6.2
America	22	6.2
737, 747...	18	5.1
Others	19	5.4

The third question was a multiple-choice question that constructed according to the findings of focus groups and it was asking *if Boeing were a person, what its gender and personality would be*. Reactions were again consistent with the focus groups; “male”, “tall” and “fat” were the mostly selected features. However, even though Boeing was pictured as mostly “old” in focus groups, survey results show that “young” was marked more than “old”. In addition, the words “active”, “calm” and “fun” were selected with considerably frequencies (see Table 6.3).

Table 6.3: Summary of responses (Q3) in terms of frequencies

Feature	Frequencies
Male	216
Fat	182
Tall	149
Active	116
Calm	115
Young	80
Fun	72
Old	55
Short	49
Boring	49
Thin	37
Female	37

6.1.2 Intel

The answers for the first question indicate that, as it is seen on Table 6.4 below, Intel is not the first brand that is associated with the word “computer”. This situation is also an indicator of that Intel is a typical B2B brand.

Table 6.4: Summary of responses against (Q1) for Intel in terms of frequencies

Brand	Frequency	Rank		
		1 st	2 nd	3 rd
HP	199	71	76	52
Toshiba	132	42	48	42
IBM	93	39	27	27
Dell	83	35	32	16
Apple	80	23	28	29
Microsoft / Windows	75	35	17	23
Sony	56	16	16	24
Intel	35	17	13	5

Although it was generally put in the second place, HP appears as the brand with the highest brand awareness level with frequency of 199. HP is followed by Toshiba, IBM, Dell and Apple with the frequencies of 132, 93, 83 and 80 respectively. What is noteworthy is, unlike focus groups, Microsoft/ Windows seems to have a high brand awareness level.

This is an interesting result showing that brand awareness of Boeing is higher when compared to Intel. Although Boeing appeared at 1st place and noted by 178 people, Intel is far below in terms of frequencies. Besides, this result was unpredictable as it was observed in focus groups that people were mostly familiar with Intel brand than with Boeing.

For the second question, brand associations of Intel (Table 6.5) were noted as “processor” even more than “computer”, “technology”, “monopoly” and “speed” respectively. “Monopoly” is the interesting association showing that Intel is perceived as almost the “one and only brand” in its market. “Other” covers for the statements like “AMD”, “blue” and a pronounce-like Turkish word “entel”.

Table 6.5: Intel brand associations in terms of frequencies and percentages

Association	Frequency	Percent (%)
Processor	129	36.4
Computer	66	18.6
Technology	28	7.9
Monopoly	22	6.2
Speed	20	5.6
Pentium, Centrino	19	5.4
Other	20	5.6

Lastly, the responses for Q3 were consistent with the focus groups in terms of features “young” and “active” (see Table 6.6). For gender, there was a tail between “male” (124) and “female” (105) selections. Therefore, though Boeing is perceived as a masculine brand, Intel is not perceived as masculine, neither feminine but as young and active brand.

Table 6.6: Summary of responses for the multiple choice question (Q3)

Feature	Frequencies
Young	194
Active	190
Thin	137
Tall	128
Male	124
Female	105
Calm	55
Boring	48
Short	30
Old	14
Fat	14

All the perceptions against Boeing and Intel are expected to be helpful at the discussions and interpretations towards the hypotheses testing.

6.2 Modeling Consumer Evaluations of Brand Extensions

The regression model was written as (4.3):

$$Y = \alpha + \beta_1 Q + \beta_2 T + \beta_3 B + \beta_4 R + \beta_5 D + \beta_6 I + \beta_7 C + \beta_8 E + \beta_9 QB + \beta_{10} QT + \varepsilon \quad (4.3)$$

where Y (Evaluation) is the average of the perceived quality of the extension and the likelihood of purchasing the extension, Q (for testing H_1) is the overall perceived quality toward the parent brand, T (H_2), B (H_3) and R (H_4) are the fit measures for transferability of skills and assets, consistency of brand concept and relatedness respectively, D (H_5) is the perceived difficulty of making the extension, I (H_6), C (H_7) and E (H_8) are the perceived innovativeness, corporate social responsibilities and environmental concern of the parent brand company, and QB (H_9) and QT (H_{10}) are interaction or moderator terms between the perceived quality and brand concept consistency or transferability, respectively.

The dependent variable was attitude towards the extension, operationalized by the average of perceived quality of extension and the likelihood of purchasing the extension measures. The use of two indicators provided a more reliable measure of attitude construct, as the correlation between the two was 0.52 suggesting a reliability of 0.68. As a summary of whole data, the mean values of variables in the regression model are listed in Table 6.7.

As some terms interact with each other, the multicollinearity of regression model was examined at first. High variance influence factors ($VIF > 10$) for interactions terms indicated a high degree of multicollinearity among these variations. Therefore the “residual centering” approach, as suggested by Lance (1988), was adopted to diminish the degree of multicollinearity and then analyses conducted.

Table 6.7: Extension level means

Brand extension	Attitude towards extension	Parent brand quality	Transfer	Brand concept consistency	Relatedness	Difficult	Innovative	CSR	Environmental concern
Boeing digital wristwatch	2.47	3.77	2.95	2.26	2.28	2.34	3.39	2.83	2.81
Boeing flight simulation computer game	3.93	3.77	4.29	4.33	3.87	1.59	3.39	2.83	2.81
Boeing luggage	3.13	3.77	2.78	3.16	3.37	2.45	3.39	2.83	2.81
Intel mp3 player	3.20	4.01	3.75	3.29	3.67	1.95	4.06	2.95	2.82
Intel notebook	3.93	4.01	4.11	4.32	3.79	1.61	4.06	2.95	2.82
Intel LCD TV	3.12	4.01	3.38	3.15	3.48	2.54	4.06	2.95	2.82
Average	3.30	3.89	3.54	3.41	3.49	2.08	3.73	2.89	2.82
Standard deviation	0.56	0.13	0.61	0.79	0.81	0.42	0.37	0.07	0.01

6.2.1 Multicollinearity and residual centering approach

Multicollinearity is a problem that occurs when the independent variables are highly correlated with one another. Although that situation does not affect the model's overall ability to predict, but it can influence the interpretation of individual coefficients and confuse the findings. However, multicollinearity can be assessed by a statistic, the variance inflation factor (VIF): the critical cutoff was suggested as $VIF > 10$ and such situation requires removing the variable from the independent variables and running the analysis again (Tang et al., 2008).

The original Aaker and Keller study (1990) and replication studies (Sunde and Brodie, 1993; Bottomley and Doyle, 1996; Van Riel et al., 2001, Tang et al., 2008) have all noted a presence of multicollinearity between main effects and interaction terms. They all corrected for multicollinearity using the Lance (1988) "residual centering" method in analysing their data. Also in the current model, multicollinearity caused by a high correlation between main effects and the interaction term was present. The VIF scores indicate to what extent each independent variable is explained by the other independent variables. A condition index greater than 30 implies that a severe collinearity is present among the variables (Lance, 1998).

Residual centering method developed by Lance (1988) is a two-step regression that "serves to substantially reduce multicollinearity among first-order terms in polynomial regression equations for any given independent variable". In this two-stage regression procedure, each interaction variable was regressed (e.g. perceived quality of the parent brand * brand concept consistency) on its two component parts (i.e. quality and fit in the example) using OLS regression. Then, the resulting residuals (quality * consistency [residual] in the example) were used in place of the respective interaction term when testing the full effects model estimated using OLS (Bottomley and Holden, 2001).

Multicollinearity was successfully eliminated for independent variables Quality, Transferability and Consistency, and the interaction terms Quality*Consistency and Quality*Transfer, whose VIF scores fell below 2.23 or lower after residual centering. Since all VIF scores were in the range of 1.35-2.23, multicollinearity was totally eliminated ($VIF < 2.23$) and thus there was no need for omitting any variable.

Table 6.8 summarizes the VIF scores of regression variables before and after residual centering.

Table 6.8: VIF scores of regression variables before and after residual centering

Independent variables	Before residual centering	After residual centering
<i>Parent brand-specific effects</i>		
Parent brand quality	14,061	1,425
Innovativeness	1,489	1,489
CSR	1,693	1,693
Environmental concern	1,631	1,631
<i>Brand extension-specific effects</i>		
Perceived transferability	48,696	1,678
Brand concept consistency	52,256	2,228
Relatedness	1,878	1,878
Difficulty	1,352	1,352
<i>Interaction effects</i>		
Quality*Consistency ^a	67,486	1,691
Quality*Transfer ^a	67,622	1,692

Formally, the two interaction variables are labeled as “QUALITY*CONSISTENCY [Residual]” and “QUALITY*TRANSFER [Residual]” after the residual centering has been applied.

6.2.2 Regression analysis

The regression model with residual centering can be written as;

$$Y = \alpha + \beta_1 Q + \beta_2 T + \beta_3 B + \beta_4 R + \beta_5 D + \beta_6 I + \beta_7 C + \beta_8 E + \beta_9 QB_{\text{residual}} + \beta_{10} QT_{\text{residual}} + \varepsilon \quad (6.1)$$

where the dependent variable Y^* = attitude towards the brand extension; and where the independent variables Q = Quality, T = Transfer, B = Brand Concept Consistency, R = Relatedness, D = Difficult, I = Innovativeness, C = CSR, E = Environment, α = Intercept and ε = Error term.

where the interaction terms:

$$QB_{\text{[residual]}} = \text{Quality} * \text{Brand Concept Consistency [Residual]}$$

$$QT_{\text{[residual]}} = \text{Quality} * \text{Transfer [Residual]}$$

Model was formally tested by means of linear regression. The analysis included the data from the 314 respondents, giving a total sample size of 1686. The significance of the regression model as a whole was tested by SPSS, and F statistic was computed

as 211,344 which is significant at $p=0.000$, theoretically indicating that one or more regression coefficients have a value different from zero. The F-value determines whether the equation is better than chance and a p-value of 0.05 or lower indicates null hypothesis that the independent variables are not related to the dependent variable is rejected. The “goodness of fit” of the regression model is determined by its R^2 and it ranges from 0-1.0. It captures the percentage deviation from the mean in the dependent variables that could be explained by the model. It is always possible to increase R^2 by adding extra explanatory variables, regardless of the true significance of these. A fairer measure of closeness of fit is *adjusted R^2* which accounts for the number of explanatory variables in relation to the number of observations (Şenesen, 2006). At the aggregate level, the adjusted R^2 for the current model is 0.56 which compares favorably with the original Aaker and Keller (1990) model and replications studies. Results of regression analyses are given in Table 6.9 and Table 6.10 at both aggregate level and brand level.

Table 6.9: Aggregate regression model of the consumers’ evaluation

Independent variables	Standardized regression coefficient	Regression coefficient	t-value
QUALITY (perceived quality of original brand)	0.065	0.082	3.34 **
INNOVATIVE (perceived ability in product innovation)	0.062	0.060	3.12 **
CSR (corporate social responsibility)	0.021	0.020	0.97
ENVIRONMENT (commitment to environmental protection)	0.094	0.096	4.52 *
DIFFICULT (perceived difficulty of making extension)	-0.021	-0.020	-1.23
RELATEDNESS (relatedness between the existing products of parent brand and extended product)	0.105	0.088	4.69 *
CONSISTENCY (Brand concept consistency between the parent brand and extension)	0.533	0.417	21.94 *
TRANSFER (transfer of skills/assets from parent to extension product class)	0.148	0.134	7.01 *
QB _[residual] (interaction term between quality perception with consistency)	0.015	0.014	0.72
QT _[residual] interaction term between quality perception with transfer	0.044	0.041	2.06 ***
Sample size = 1686			
Adjusted $R^2=0.56$			

* $p<0.001$; ** $p<0.002$; *** $p<0.05$

Bold values represent highest influential factors.

Table 6.10: Standardized regression coefficients full model at brand level

Brand	Parent brand quality		Innovative (I)	CSR (C)	Environmental concern		Difficult (D)	Relatedness (R)	Brand concept consistency		
	(Q)				(E)	(B)			Transfer (T)	Q*B	Q*T
BOEING	0.023		0.019	0.043	0.118*	-0.001	0.141*	0.501*	0.172*	-0.010	0.016
Sample size =842 Adjusted R ² = 0.53											
INTEL	0.105*		0.112*	-0.002	0.075**	-0.043	0.027	0.608*	0.109*	0.040	0.067**
Sample size =825 Adjusted R ² =0.59											

After residual center approach

*p<0.001; **p<0.05

6.2.3 Hypotheses testing

After the regression analyses, hypotheses were tested and summarized in Table 6.11.

Table 6.11: Factors affecting consumer evaluations: a summary

Hypothesis	Aggregate level	Brand level
H1: Parent brand quality	Accepted	Rejected for Boeing only
H2: Transfer	Accepted	Accepted for both brands
H3: Brand concept consistency	Accepted	Accepted for both brands
H4: Relatedness	Accepted	Rejected for Intel only
H5: Difficult	Rejected	Rejected for both brands
H6: Innovative	Accepted	Rejected for Boeing only
H7: CSR	Accepted	Accepted for both brands
H8: Environment	Rejected	Rejected for both brands
H9: Parent brand quality*Brand concept consistency	Rejected	Rejected for both brands
H10: Parent brand quality*Transfer	Accepted	Rejected for Boeing only

6.2.3.1 Parent brand quality

At aggregate level, the beta coefficient for the variable QUALITY is significant ($P < 0.002$). The effect of QUALITY is relatively weak (0.07) compared to the original and replication studies. The first hypothesis is henceforth accepted.

However, on a brand level, while QUALITY is significant at $p < 0.001$ for Intel (with coefficient of 0.105), for Boeing this dimension is insignificant at $p < 0.05$.

In summary, the first hypothesis is accepted at $p < 0.002$, but at a brand level rejected for Boeing brand.

6.2.3.2 Transfer

The beta coefficient for the variable TRANSFER is significant ($p < 0.001$) and have a moderate effect (0.148). Thus, the second hypothesis is accepted at aggregate level. The effect of TRANSFER is inline with findings from previous replication studies.

Also on the brand level, TRANSFER is significant for both brands tested at $p < 0.001$ and its effect is stronger for Boeing brand (with 0.172 beta coefficient) than Intel (0.109).

To sum up, the second hypothesis is accepted at $p < 0.001$ both at aggregate level and brand level.

6.2.3.3 Brand concept consistency

Brand concept consistency item has been found as the highest influential factor with the beta coefficient of 0.533. Therefore, the third hypothesis is accepted. The variable CONSISTENCY is also highly substantial for both brands at $p < 0.001$ and the beta coefficient for Intel is 0.608, which is much higher than for Boeing (0.501).

To summarize, the third hypothesis is accepted ($p < 0.001$) at aggregate level and brand level.

6.2.3.4 Relatedness

At aggregate level, the variable RELATEDNESS is significant at $p < 0.001$ and have a moderate effect with beta coefficient of 0.105. Thus, the forth hypothesis is accepted.

However, what is noteworthy is that, at brand level, while RELATEDNESS is significant for Boeing brand ($p < 0.001$) and have a moderate effect (0.141), for Intel brand it is insignificant.

To conclude, the forth hypothesis is accepted ($p < 0.001$) at aggregate level, but at brand level rejected for Intel brand.

6.2.3.5 Difficult

The beta coefficient for the variable DIFFICULT indicates a negative effect and is insignificant both at aggregate level and brand level. Therefore, the fifth hypothesis is rejected.

To sum up, the fifth hypothesis is rejected at both aggregate level and brand level.

6.2.3.6 Innovative

The beta coefficient for the variable INNOVATIVE is significant at $p < 0.001$ with a weak effect (0.062). The second hypothesis is therefore accepted.

On a brand level, same with the parent brand quality item, while H_2 is accepted for Intel at $p < 0.001$, it is rejected for Boeing at $p < 0.05$.

In summary, the sixth hypothesis is accepted at $p < 0.001$ at aggregate level, however, it is rejected for Boeing brand level.

6.2.3.7 Corporate social responsibility

Both in aggregate level and brand level, the beta coefficient for the variable CSR is insignificant at $p < 0.05$. Since the CSR effect was hypothesized to be zero, the third hypothesis is accepted.

To sum up, the seventh hypothesis is accepted at both aggregate level and a brand level.

6.2.3.8 Environmental concern

The beta coefficient for ENVIRONMENT item is significant at $p < 0.001$, although its effect is considerably moderate (0.094). On a brand level, beta coefficient for both brands are significant ($p < 0.001$ for Boeing; $p < 0.05$ for Intel) with a slightly larger effect on Boeing compared with Intel.

In summary, the eighth hypothesis is rejected at $p < 0.001$ on an aggregate level and for Boeing brand, and at $p < 0.05$ for the brand Intel.

6.2.3.9 The interaction effect between Perceived brand quality and Brand concept consistency

The moderator variable QUALITY*CONSISTENCY [Residual] shows no significance. Therefore, the ninth hypothesis is rejected. On a brand level, the moderator variable, again, shows no significance.

To conclude, the ninth hypothesis rejected at both aggregate level and brand level.

6.2.3.10 The interaction effect between Perceived brand quality and Transfer

The beta coefficient for variable QUALITY*TRANSFER [Residual] is significant at $p < 0.05$. Therefore, the tenth hypothesis is accepted.

On a brand level, the moderator variable shows no significance for the brand Boeing, however it is significant for Intel at $p < 0.05$ with beta coefficient of 0.067.

To sum up, the tenth hypothesis is accepted on an aggregate level at $p < 0.05$, and is rejected for Boeing brand.

6.3 Discussions and Interpretations

A comparison of current study with the original and replication study is displayed in Table 6.12. As it may be seen in this table, the coefficients of determination for brand extension models in previous studies have been increasing ever since the researchers paid attention to multicollinearity and started to use residual centering method developed by Lance (1988): Aaker and Keller (0.26) and Sundie and Brodie (0.43) (*not adjusted for multicollinearity*); Nijssen and Hartman (0.49), Bottomley and Doyle (0.43 for NZ study and 0.48 for UK study), van Riel et al. (0.54) and Tang et al. (0.63) (*adjusted for multicollinearity*). Besides, the findings of the study are discussed in terms of defined variables, as the following.

6.3.1 Parent brand quality

Even though, at aggregate level, parent brand quality seemed to play a role in evaluating the brand extension as expected; for “Boeing”, results showed that the parent brand quality had no effect on evaluation. Furthermore, again on aggregate level, the beta coefficient for the QUALITY variable of the current study is considerably lower than in previous replication studies (0.065). In other words, the perceived quality of a B2B brand has less spillover effects than a B2C brand.

Besides, in a brand level way, the insignificant effect of parent brand quality of Boeing on evaluation of extension may be related to the lack of experience, or lower experience compared to Intel. Furthermore, the accident may also have influenced the customers' attitudes towards this brand.

Generally, brand quality may not be the optimal way to measure brand equity in the context of B2B brands judged by consumers. Nevertheless, the beta coefficient for

QUALITY is positive. Thus, even though consumers lack experience of B2B brands they still are able to make some inferences on their overall quality albeit in a cautious way.

6.3.2 Transfer

The first fit variable, TRANSFER is significant and its effect is moderate (0.148). This important finding indicates that current skills and resources of a company are perceived as being transferable from business markets to consumer markets. This finding is also relevant across two brands with a notably higher beta coefficient especially for the Boeing brand (0.172) compared to Intel (0.109).

However, at the same time, the effect of TRANSFER item is weaker compared to the original study and its replications. While this item generally appears as the most substantial factor and mostly together with SUBSTITUTE, in current study it is dominated by the other fit factor CONSISTENCY. This finding indicates that BRAND CONCEPT CONSISTENCY is a very important factor that needs be considered in the future research in this area.

6.3.3 Brand concept consistency

The second fit variable, BRAND CONCEPT CONSISTENCY, is the coefficient with the most explanatory power (0.533) in the model. Although this variable was not used in previous studies but the study of Tang et al. (2008), it has proven to be a highly relevant fit variable compared to the variables of fit used in the original and replication studies (see Table 6.11).

Brand concept consistency is also highly relevant on a brand level. When the extension level means are analyzed, it is obvious that the highest attitude levels *do* match with the extensions that have the highest consistency rank, which are *flight simulation computer game* for Boeing and *notebook* for Intel. This is also an exact indicator of the dominance of brand concept consistency and is consistent with the focus groups findings.

Table 6.12: Comparison with the original and replication studies

Independent variables	Aaker and Keller (1990)	Sunde and Brodie (1993)	Nijssen and Hartman (1994)	Bottemley and Doyle (1996) NZ	Bottemley and Doyle (1996) UK	Van Riel et al. (2001)	Tang et al. (2008)	Current Study
QUALITY	-0.01	0.25***	0.24***	0.25***	0.22***	0.16*	0.116*	0.065**
INNOVATIVE	-	-	-	-	-	-	0.127*	0.062**
CSR	-	-	-	-	-	-	-	0.021
ENVIRONMENT	-	-	-	-	-	-	0.002	0.094*
DIFFICULT	0.12	0.03	omitted	0.03	0.01	-0.16*	-0.157*	-0.021
COMPLEMENT	0.17***	0.30***	-0.00	0.30**	0.31**	0.20*	-	-
SUBSTITUTE	0.08***	0.18***	0.06***	0.18**	0.18**	0.19*	-	-
RELATEDNESS	-	-	-	-	-	-	-	0.105*
CONSISTENCY	-	-	-	-	-	-	0.541*	0.533*
TRANSFER	0.24***	0.26***	0.60***	0.26*	0.31*	0.40	0.149*	0.148*
Q*B	-	-	-	-	-	-	0.062*	0.015
Q*T	0.12	0.08***	0.08***	0.08**	0.08**	0.08***	0.006	0.044***
Q*C	0.25**	0.05***	-0.02	0.05**	0.05***	-0.01	-	-
Q*S	0.18***	-0.01	-0.07	-0.01	0.03	-0.01	-	-
Sample size	2140	1558	693	1559	1358	808	1512	1686
Adjusted R ²	0.26	0.43	0.49	0.43	0.48	0.54	0.63	0.56

*p<0.001; **p<0.01; ***p<0.05

Beta coefficients are taken from the full model. Since the variables of the current model are different from the variables of the original and replication studies, a formal comparison is not suitable. The comparison is nevertheless interesting on an intuitive level.

6.3.4 Relatedness

Relatedness is the third and last fit variable, which was never used in previous studies but also found as an important factor with a moderate effect in brand extension evaluation process. However, at a brand level, its effect was insignificant for Intel brand while it has a moderate effect for Boeing. That result may be interpreted with the help of focus groups findings. The hypothetical brand extensions for Intel were all technology-related and electronics products, that is why the respondents found three extensions consistent with the existing products of Intel and gave the similar rankings. Therefore, RELATEDNESS was no longer an indicator of brand extension evaluation.

However, for Boeing brand, as three hypothetical extensions were different from each other, RELATEDNESS item had a selecting effect and *flight simulation computer game* was given the highest rank.

Thus, while setting the hypothetical extensions, RELATEDNESS also needs to be considered next to CONSISTENCY item.

6.3.5 Difficult

A positive relationship between extension attitude and perceived difficulty of producing the extension was hypothesized. The variable DIFFICULT was significant, also the sign was reversal, i.e. the beta coefficient turned out to be negative (-0.021). As it is seen in Table 6.7, both brands are perceived as highly innovative and the extensions were found very easy to make. Thus, this result indicates that there might be some counter-interaction between two terms: INNOVATIVE and DIFFICULT.

In the original Aaker and Keller (1990) study and replication studies with exception from van Riel, Lemmink and Ouwersloot's (2001) and Tang, Liou and Peng's (2008) study, the DIFFICULT have always been found insignificant (Table 6.11). Therefore, finding of the current study is consistent with the others.

6.3.6 Innovative

Parent brand innovativeness has a weak effect (0.062) on brand extension evaluation at the aggregate level, however it is insignificant for Boeing brand.

That item has not been hypothesized in original study and replication studies except from Tang et.al (2008). In addition, not much research has been done with respect to brand innovativeness (most research has been done in the area of consumer innovativeness). The results show that innovativeness is not a stronger predictor of the dependent variable than fit variables: parent brand consistency, transfer and relatedness. It may be said that, no matter how innovative the firm is the extension *has to be* consistent both with the brand and with existing products to gain a good attitude.

6.3.7 Corporate social responsibility

Consistent with the expectations, parent brand corporate social responsibility has no effect on extension evaluation. This result may be explained that both B2B brands are not popular in media and the people do not hear about it even if they have any CSR and public relation activities.

Thus, as this item has been left as “outcast” in original study and its replication, it is not meaningful to put this item in the model in the future studies.

6.3.8 Environmental concern

Contrary to expectations and recent studies, environmental concern has a positive and also moderate effect (0.094) on extension evaluation. In addition, this is larger than both parent brand quality and innovativeness. Although original study and replication studies did not include environmental concern in their model, only Tang et al. (2008) hypothesized this variable but found its effect insignificant.

On a brand level, the beta for ENVIRONMENT was consistently high for Boeing brand (0.118), which scored higher compared to Intel (0.075). This might be seen as logical since Boeing might be seen as a company that produces heavy equipment and airplanes with environmental impact. This is in contrast to Intel, which manufactures microprocessors, and can be considered as being “clean” and having less impact on the environment.

A likely explanation for the positive and relatively large effect of the ENVIRONMENT coefficient compared to Keller and Aaker’s (1997) findings is that consumers value environmental concerns significantly more than industrial buyers

do. This highlights the difference of perceived environmental responsibility among end-consumers vis-à-vis B2B customers.

6.3.9 Interaction effects

Finally, with regard to interactions H_9 and H_{10} , contrary to Tang et al. (2008), results indicate a significant interaction between perceived brand quality and transferability (QT ; 0.044, $p < 0.05$) but not between brand quality and consistency of brand concept. However, at the individual level, QT was only significant for Intel and QB was insignificant for both brands. This findings suggest that the effect of high perceived quality for the parent brand on the acceptance of a brand extension will be strengthened if there is a perceived transferability of the parent B2B brand to effectively employ its skills and assets in producing B2C extension; yet the effect is not affected by the brand concept consistency between the parent B2B brand and B2C extension.

The weak beta coefficient for QT interaction implies that this interaction effect is no substantial as the other factors. A reasonable explanation for this is that the perceived brand quality in consumers' mind seems to be exact and is not affected, or weakly affected, by the other factors related to extended product.

7. CONCLUSION

Consumers are familiar with a firm's strategy of introducing new products through brand extension. In general, the variables that by far have the largest effects in explaining extension attitude are the two fit variables Transfer and Brand concept consistency. This is inline with previous studies where the effect of fit variables to a great extent superseded those of other variables. However, the findings of the current study are, however, mixed when compared to traditional consumer-based brand extensions.

At the aggregate level, the fit variables, especially brand concept consistency, have the most substantial impact on the extendibility for industrial brand to consumer products. This is similar to the findings of Völckner and Sattler (2006) which assert that consistency of brand concept (*B*) is more effective on consumer evaluations toward the B2B-to-B2C brand extensions than is the transferability (*T*) of skills or assets. This contrasts to that of the consumer based brand extension. It appears that brand concept consistency is more important as a dimension of fit than the transferability of skills or assets in consumer evaluations of B2B-to-B2C brand extensions. Besides, the findings indicate that the product-level relatedness (*R*), unlike the previous studies, which was only considered in the current study, as the third fit variable has an important effect on B2B-to-B2C brand extensions. This situation points that if the extended B2C product is perceived as related to the existing products of parent B2B brand, consumers tend to accept the extension. Thus, product-level relatedness also needs to be taken into consideration as a "fit" measure next to brand concept consistency and transferability.

Furthermore, unlike other studies, the perceived image of quality for the parent B2B brand extended to B2C products was found to be not affected when there was a high brand concept consistency. Besides, the extent of transferring skills or assets in producing the extension had little effect on the image of perceived quality for the parent B2B brand extending to B2C products.

In addition, parent brand quality (Q), perceived innovativeness (I) and environmental concerns (E) have effect on the attitude towards the extension. What is surprising is the commitment to environment having higher effect than parent brand quality and this result seems very different from the ones reached by the previous studies.

The difficulty of making the extension (D) has a negative beta but is insignificant, which is consistent with other studies except for van Riel et al. (2001) and Tang et al. (2008). While Tang et al. (2008) note that the consumers tend to accept the cross product-class extension only if the extended consumer product is easy to produce and to market, this current study found no such indicator.

At the brand's individual extension level, the brand concept consistency appears as the dominant factor that affects consumer evaluations of the B2B-to-B2C brand extension. The findings show that there is an opportunity for industrial companies to leverage brand equity to consumer markets if the concept of the extension product is consistent with the parent brand. In addition, brand concept consistency, the transferability of assets from the parent to the extension and environmental concerns are the only three factors that influenced a respondent's attitude toward the B2B brand to B2C extension across all for two industrial brands. This indicates that while the fit is the most important factor for brand extension, commitment to environment also becomes an important factor whilst dealing with B2B brands.

The current study has shown that it indeed is possible to extend B2B brands into the consumer market. It presented the brand extension model of Aaker and Keller (1990), which was modified to fit the current context by drawing theories from Farquar et al. (1990), Boush and Loken (1991), Park et al. (1991), Broniarczyk and Alba (1994), Herr et al. (1996), Keller and Aaker (1997) and Tang et al. (2008). More specifically, this study provided evidence that in the context of business-to-business brand extensions, consumers use the brand concept consistency with the parent brand category and transferability of skills and resources and as major cues to evaluate extensions. Besides, product level relatedness has a considerable affect on the attitude towards extension.

Corporate branding attributes such as innovativeness and environmental concerns also play a large role. The goodness of fit of the current model also seems to be high than the previous studies except for Tang et al. (2008).

7.1 Limitations and Directions for Future Research

There are some limitations to the present study. A first concern relates to the way the variables are measured. As single-item measures have been the object of serious criticism with respect to their unreliability and low validity (Churchill 1979), it might be useful to develop more reliable, multi-item measurement scales as Bottomley and Doyle (1996) already suggest, although it has to be taken into account that a high Cronbach's alpha is not necessarily a guarantee for generalizability.

A second concern relates to the one-sidedness of the current study. It measured only consumer acceptance of the brand extensions. A relevant question in the context of the current research would also address the attitudes of existing B2B customers when launching consumer brand extensions. In other words, the reciprocal impacts of consumer brand extensions on brand equity can be measured with respect to buyers in both consumer (B2C) and business (B2B) markets.

A third limitation relates to the number of brands used in the study. Only two *product* brands were used among the numerous well-known global industrial brands. Differences in adjusted R^2 on a brand level suggest that there are attributes unique to each brand. A more detailed study on brand extensions could take into account numerous factors such as previous extensions (Keller and Aaker, 1992), effects of extensions on a company's brand portfolio (Dacin and Smith, 1994) or brand architecture (e.g. how brand architecture facilitates brand extension acceptance).

A fourth limitation about the qualitative phase, focus groups, is the small number of respondents showing a very weak representing power. Because of time limitation (especially for getting working people together), only four mini focus group interviews were conducted. Difficulty of persuading people to participate in such interviews is another reason of the limitation. Also, finding an experienced and professional moderator to manage interviews due to, especially, financial matters is another difficulty on this issue. Hence, the researcher, herself, conducted the interviews. Besides, as the research is about B2B brands, it was observed that a lack of brand knowledge and brand awareness do exist especially for service brands (such as Ernst and Young and Deloitte). However, for product brands, Intel and Boeing, awareness level was high and the responses were much more satisfying.

A fifth concern relates to the fit variables. Because of the non-applicability of the fit variables Substitute and Complement used in previous replication studies, three fit variables were used (Transfer, Relatedness and Brand concept consistency) instead and as the current study have considered different factors, it was very difficult to make a proper comparison with the previous studies (in terms of variable by variable). Brand concept consistency proved to be a useful factor, probably because of its abstractness. Future studies on brand extensions could include “brand concept consistency” and “relatedness” as well as the original fit variables Substitute and Complement to further examine whether the abstractness of the former or the concreteness of the latter three are superior in attitude formation.

A sixth limitation concerns the way the brand extension were presented. Since each brand extension was presented only as a non-branded generic product and without any accompanying text or visual cues, the extent to which a true assessment of the quality and likelihood of purchasing by the consumer might have been limited. Related to the brand extension presentation is the absence of pricing. Van Riel et al. (2001) suggest that consumers may use “price clues” to assess (especially service) quality (Zeithaml, 1988).

7.2 Implications

The implications of the study may be evaluated both from theoretical and managerial perspectives.

7.2.1 Theoretical implications

Bottomley and Doyle (1996) called for further research on the role of “brand concept consistency as an important factor in determining how consumers form attitudes towards brand extensions. The current study has proven, at least in the current context, that brand-specific associations are more important than category similarity, in consumer attitude formation of B2B-brand extensions. Hence, Broniarczyk and Alba’s (1994) claim that the “brand” in brand extension as superior to category-based similarity is supported by the current study.

The present study has also proven that variables of Keller and Aaker’s (1997) corporate brand extension model can be used in the original AandK model,

showing further evidence that the original AandK model can be contextually adapted. By replacing irrelevant variables of the AandK model with contextually relevant concepts and theories as discussed above, the present study shows that a broad empirical replication of Aaker and Keller's model (1990) is both possible and valuable for additional explanatory power and insight in more complex or specific cases.

Finally, unlike many of previous research, the current study conducted a qualitative study and inserted some extra questions in quantitative research survey to get more data about the brand images and brand awareness. These data were used to discuss and interpret the results more properly. Thus, conducting a qualitative phase would be an effective way to get first reactions and to formulate the hypotheses.

7.2.2 Managerial implications

Decision of extending a business-to-business brand into the consumer market remains as a predominantly managerial topic. What the current study has shown is that it is possible to do so. Brand extension strategies in the current context will be most successful when there is a "fit" between the parent brand and the extension. This fit is determined by the extent to which consumers perceive that the skills and resources of a company are useful in making the extension, and more importantly whether the extension is consistent with the brand concept of the parent brand. Any extension must therefore begin with examining the parent brand itself.

The quality of the parent brand plays a lesser role in brand extension acceptance; although quality should not be discounted, since consumers can assess brand equity in different ways than measured by the current study.

Corporate brand attributes such as environmental concerns are highly important and can be achieved by supporting local communities through various activities and programs. It is, however, unclear whether commitment to environment is a trend or whether it will remain as an important attribute. Nevertheless, a B2B company should be aware of the difference in ethical values among consumers and industrial buyers.

Another corporate brand attribute that facilitates brand extension acceptance is innovativeness. A company should therefore strive to build an innovative reputation and form a philosophy of constantly launching advanced products or services.

An important practical constraint with respect to the current model is that it is only tested on B2B brands. The validity or importance of the above is hence not confirmed in cases after a brand makes the transition from B2B to both B2B and consumer brands. It may be possible that after a transition is made, i.e. when the former B2B brand is both a B2B and B2C brand, consumers would evaluate the brand extensions anyhow according to the original model by Aaker and Keller (1990). This pinpoints the context-specificity of the current model. However, the current model is still beneficial for managers by pointing out the general important factors to take into consideration.

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APPENDICES

APPENDIX A.1 : Focus Group Questionnaire (Turkish)

APPENDIX A.2 : Focus Group Questionnaire (English)

APPENDIX A.3 : Survey (Turkish)

APPENDIX A.4 : Survey (English)

APPENDIX A.1

1) “Uçak” diyince aklınıza gelen ilk 3 markayı yazınız.

2) Boeing markası size neyi çağrıştırıyor?

3) Boeing markası bir insan olsaydı hangi kişilik özelliklerine sahip olurdu?

4) Boeing markasının kalitesi hakkında ne düşünüyorsunuz? Lütfen 1: Ortalamanın çok altında.....5: Ortalamanın çok üzerinde olacak şekilde 1 ile 5 arasında puan veriniz.

Ortalamanın çok altında 1 Ortalamanın altında 2 Ortalama 3 Ortalamanın üzerinde 4 Ortalamanın çok üzerinde 5

5) Boeing markasını yenilikçilik, sosyal sorumluluk ve çevre duyarlılığı kriterlerine göre değerlendiriniz.

	1 Hiç yenilikçi değil	2	3	4	5 Son derece yenilikçi
Yenilikçilik					

	1 Düşük sorumluluk	2	3	4	5 Yüksek sorumluluk
Sosyal sorumluluk					

	1 Çevreyi koruma konusuna tamamen duyarsız	2	3	4	5 Çevreyi koruma konusuna son derece duyarlı
Çevreye duyarlılık					

6) Boeing markasının pazara farklı kategorilerde aşağıdaki 3 ürünü sunduğunu varsayalım. Bu ürünlerin kaliteleri hakkında ne düşünürdünüz? (Her ürün için ayrı ayrı cevaplayınız)

Lütfen **1**: Ortalamanın çok altında.....**5**: Ortalamanın çok üzerinde olacak şekilde 1 ile 5 arasında puan veriniz.

	1 Ortalamanın çok altında	2 Ortalamanın altında	3 Ortalama	4 Ortalamanın üzerinde	5 Ortalamanın çok üzerinde
Boeing pilot saati					
Boeing uçuş simülasyon oyunu					
Boeing seyahat bavul seti					

7) Boeing markasının pazara sunacağı varsayılan bu ürünler ile ilgili aşağıdaki ifadeleri (her ürün için ayrı ayrı) değerlendiriniz.

Boeing dijital kol saati....

	1 Hiç zor değil	2	3	4	5 Çok zor
Boeing için bu ürünü üretmek					

	1 Kesinlikle katılmıyorum	2 Katılmıyorum	3 Ne katılıyorum ne katılmıyorum	4 Katılıyorum	5 Kesinlikle Katılıyorum
Bu ürünü üretmek için Boeing kendi kaynaklarından faydalanabilir.					
Bu ürünü üretmek için Boeing kendi yetkinliklerini kullanabilir.					

	1 Hiç ilişkili değil	2	3	4	5 Son derece ilişkili
Bu ürün diğer Boeing ürünleri ile....					

	1 Hiç uyumlu değil	2	3	4	5 Son derece uyumlu
Bu ürün Boeing markasının bana çağrıştırdıkları ile					

	1 Hiç niyetli değilim	2 Niyetli değilim	3 Nötr	4 Niyetliyim	5 Çok niyetliyim
Bu ürünü gelecekte satın almaya...					

Boeing uçuş simülasyon oyunu....

	1 Hiç zor değil	2	3	4	5 Çok zor
Boeing için bu ürünü üretmek					

	1 Kesinlikle katılmıyorum	2 Katılmıyorum	3 Ne katılıyorum ne katılmıyorum	4 Katılıyorum	5 Kesinlikle Katılıyorum
Bu ürünü üretmek için Boeing kendi kaynaklarından faydalanabilir.					
Bu ürünü üretmek için Boeing kendi yetkinliklerini kullanabilir.					

	1 Hiç ilişkili değil	2	3	4	5 Son derece ilişkili
Bu ürün diğer Boeing ürünleri ile....					

	1 Hiç uyumlu değil	2	3	4	5 Son derece uyumlu
Bu ürün Boeing markasının bana çağrıştırdıkları ile					

	1 Hiç niyetli değilim	2 Niyetli değilim	3 Nötr	4 Niyetliyim	5 Çok niyetliyim
Bu ürünü gelecekte satın almaya...					

Boeing bavul seti....

	1 Hiç zor değil	2	3	4	5 Çok zor
Boeing için bu ürünü üretmek					

	1 Kesinlikle katılmıyorum	2 Katılmıyorum	3 Ne katılıyorum ne katılmıyorum	4 Katılıyorum	5 Kesinlikle Katılıyorum
Bu ürünü üretmek için Boeing kendi kaynaklarından faydalanabilir.					
Bu ürünü üretmek için Boeing kendi yetkinliklerini kullanabilir.					

	1 Hiç ilişkili değil	2	3	4	5 Son derece ilişkili
Bu ürün diğer Boeing ürünleri ile....					

	1 Hiç uyumlu değil	2	3	4	5 Son derece uyumlu
Bu ürün Boeing markasının bana çağrıştırdıkları ile					

	1 Hiç niyetli değilim	2 Niyetli değilim	3 Nötr	4 Niyetliyim	5 Çok niyetliyim
Bu ürünü gelecekte satın almaya...					

	1 Kesinlikle katılmıyorum	2 Katılmıyorum	3 Ne katılıyorum ne katılmıyorum	4 Katılıyorum	5 Kesinlikle Katılıyorum
Bu ürünü üretmek için Intel kendi kaynaklarından faydalanabilir.					
Bu ürünü üretmek için Intel kendi yetkinliklerini kullanabilir.					

	1 Hiç ilişkili değil	2	3	4	5 Son derece ilişkili
Bu ürün diğer Intel ürünleri ile....					

	1 Hiç uyumlu değil	2	3	4	5 Son derece uyumlu
Bu ürün Intel markasının bana çağrıştırdıkları ile					

	1 Hiç niyetli değilim	2 Niyetli değilim	3 Nötr	4 Niyetliyim	5 Çok niyetliyim
Bu ürünü gelecekte satın almaya...					

Intel dizüstü bilgisayar....

	1 Hiç zor değil	2	3	4	5 Çok zor
Intel için bu ürünü üretmek					

	1 Kesinlikle katılmıyorum	2 Katılmıyorum	3 Ne katılıyorum ne katılmıyorum	4 Katılıyorum	5 Kesinlikle Katılıyorum
Bu ürünü üretmek için Intel kendi kaynaklarından faydalanabilir.					
Bu ürünü üretmek için Intel kendi yetkinliklerini kullanabilir.					

	1 Hiç ilişkili değil	2	3	4	5 Son derece ilişkili
Bu ürün diğer Intel ürünleri ile....					

	1 Hiç uyumlu değil	2	3	4	5 Son derece uyumlu
Bu ürün Intel markasının bana çağrıştırdıkları ile					

	1 Hiç niyetli değilim	2 Niyetli değilim	3 Nötr	4 Niyetliyim	5 Çok niyetliyim
Bu ürünü gelecekte satın almaya...					

Intel LCD Televizyon....

	1 Hiç zor değil	2	3	4	5 Çok zor
Intel için bu ürünü üretmek					

	1 Kesinlikle katılmıyorum	2 Katılmıyorum	3 Ne katılıyorum ne katılmıyorum	4 Katılıyorum	5 Kesinlikle Katılıyorum
Bu ürünü üretmek için Intel kendi kaynaklarından faydalanabilir.					
Bu ürünü üretmek için Intel kendi yetkinliklerini kullanabilir.					

	1 Hiç ilişkili değil	2	3	4	5 Son derece ilişkili
Bu ürün diğer Intel ürünleri ile....					

	1 Hiç uyumlu değil	2	3	4	5 Son derece uyumlu
Bu ürün Intel markasının bana çağrıştırdıkları ile					

	1 Hiç niyetli değilim	2 Niyetli değilim	3 Nötr	4 Niyetliyim	5 Çok niyetliyim
Bu ürünü gelecekte satın almaya...					

	1 Strongly disagree	2	3	4	5 Strongly agree
The competences of Boeing are useful to make this extension					
The resources of Boeing are useful to make this extension					

	1 very unrelated	2	3	4	5 very related
This product is.....to the existing products of the Boeing brand.					

	1 very inconsistent	2	3	4	5 very consistent
This product iswith my associations of the Boeing brand.					

	1 not at all likely	2	3	4	5 very likely
I amto purchase this product in the future.					

Boeing flight simulation game....

	1 not at all difficult	2	3	4	5 very difficult
For Boeing, producing this product is...					

	1 Strongly disagree	2	3	4	5 Strongly agree
The competences of Boeing are useful to make this extension					
The resources of Boeing are useful to make this extension					

	1 very unrelated	2	3	4	5 very related
This product is.....to the existing products of the Boeing brand.					

	1 very inconsistent	2	3	4	5 very consistent
This product iswith my associations of the Boeing brand.					

	1 not at all likely	2	3	4	5 very likely
I amto purchase this product in the future.					

Boeing travel luggage....

	1 not at all difficult	2	3	4	5 very difficult
For Boeing, producing this product is...					

	1 Strongly disagree	2	3	4	5 Strongly agree
The competences of Boeing are useful to make this extension					
The resources of Boeing are useful to make this extension					

	1 very unrelated	2	3	4	5 very related
This product is.....to the existing products of the Boeing brand.					

	1 very inconsistent	2	3	4	5 very consistent
This product iswith my associations of the Boeing brand.					

	1 not at all likely	2	3	4	5 very likely
I amto purchase this product in the future.					

	1 Strongly disagree	2	3	4	5 Strongly agree
The competences of Intel are useful to make this extension					
The resources of Intel are useful to make this extension					

	1 very unrelated	2	3	4	5 very related
This product is.....to the existing products of the Intel brand.					

	1 very inconsistent	2	3	4	5 very consistent
This product iswith my associations of the Intel brand.					

	1 not at all likely	2	3	4	5 very likely
I amto purchase this product in the future.					

Intel notebook....

	1 not at all difficult	2	3	4	5 very difficult
For Intel, producing this product is...					

	1 Strongly disagree	2	3	4	5 Strongly agree
The competences of Intel are useful to make this extension					
The resources of Intel are useful to make this extension					

	1 very unrelated	2	3	4	5 very related
This product is.....to the existing products of the Intel brand.					

	1 very inconsistent	2	3	4	5 very consistent
This product iswith my associations of the Intel brand.					

	1 not at all likely	2	3	4	5 very likely
I amto purchase this product in the future.					

Intel LCD Television....

	1 not at all difficult	2	3	4	5 very difficult
For Intel, producing this product is...					

	1 Strongly disagree	2	3	4	5 Strongly agree
The competences of Intel are useful to make this extension					
The resources of Intel are useful to make this extension					

	1 very unrelated	2	3	4	5 very related
This product is.....to the existing products of the Intel brand.					

	1 very inconsistent	2	3	4	5 very consistent
This product iswith my associations of the Intel brand.					

	1 not at all likely	2	3	4	5 very likely
I amto purchase this product in the future.					

APPENDIX A.3

İstanbul Teknik Üniversitesi İşletme Mühendisliği programında yüksek lisans bitirme çalışması kapsamında, belli bir konudaki tüketici tutumlarını ve etkili faktörleri belirlemeye yönelik akademik bir çalışma için aşağıdaki anket formunu doldurmanızı rica ederiz. Katılımınız için teşekkür ederiz.

1) “Uçak” kelimesi size hangi 3 marka ismini çağrıştırır?

1.....

2.....

3.....

7) **Boeing** markasının pazara sunacağı varsayılan bu ürünler ile ilgili aşağıdaki ifadeleri (her ürün için ayrı ayrı) değerlendiriniz.

Boeing dijital kol saati....

	1 Hiç zor değil	2	3	4	5 Çok zor
Boeing için bu ürünü üretmek					

	1 Kesinlikle katılmıyorum	2 Katılmıyorum	3 Ne katılıyorum ne katılmıyorum	4 Katılıyorum	5 Kesinlikle Katılıyorum
Bu ürünü üretmek için Boeing kendi kaynaklarından faydalanabilir.					
Bu ürünü üretmek için Boeing kendi yetkinliklerini kullanabilir.					

	1 Hiç ilişkili değil	2	3	4	5 Son derece ilişkili
Bu ürün diğer Boeing ürünleri ile....					

	1 Hiç uyumlu değil	2	3	4	5 Son derece uyumlu
Bu ürün Boeing markasının bana çağrıştırdıkları ile					

	1 Hiç niyetli değilim	2 Niyetli değilim	3 Nötr	4 Niyetliyim	5 Çok niyetliyim
Bu ürünü gelecekte satın almaya...					

Boeing uçuş simülasyon oyunu....

	1 Hiç zor değil	2	3	4	5 Çok zor
Boeing için bu ürünü üretmek					

	1 Kesinlikle katılmıyorum	2 Katılmıyorum	3 Ne katılıyorum ne katılmıyorum	4 Katılıyorum	5 Kesinlikle Katılıyorum
Bu ürünü üretmek için Boeing kendi kaynaklarından faydalanabilir.					
Bu ürünü üretmek için Boeing kendi yetkinliklerini kullanabilir.					

	1 Hiç ilişkili değil	2	3	4	5 Son derece ilişkili
Bu ürün diğer Boeing ürünleri ile....					

	1 Hiç uyumlu değil	2	3	4	5 Son derece uyumlu
Bu ürün Boeing markasının bana çağrıştırdıkları ile					

	1 Hiç niyetli değilim	2 Niyetli değilim	3 Nötr	4 Niyetliyim	5 Çok niyetliyim
Bu ürünü gelecekte satın almaya...					

Boeing bavul seti....

	1 Hiç zor değil	2	3	4	5 Çok zor
Boeing için bu ürünü üretmek					

	1 Kesinlikle katılmıyorum	2 Katılmıyorum	3 Ne katılıyorum ne katılmıyorum	4 Katılıyorum	5 Kesinlikle Katılıyorum
Bu ürünü üretmek için Boeing kendi kaynaklarından faydalanabilir.					
Bu ürünü üretmek için Boeing kendi yetkinliklerini kullanabilir.					

	1 Hiç ilişkili değil	2	3	4	5 Son derece ilişkili
Bu ürün diğer Boeing ürünleri ile....					

	1 Hiç uyumlu değil	2	3	4	5 Son derece uyumlu
Bu ürün Boeing markasının bana çağrıştırdıkları ile					

	1 Hiç niyetli değilim	2 Niyetli değilim	3 Nötr	4 Niyetliyim	5 Çok niyetliyim
Bu ürünü gelecekte satın almaya...					

8) “Bilgisayar” kelimesi size hangi 3 marka ismini çağrıştırır?

1.....

2.....

3.....

9) Intel markası size neyi çağrıştırıyor? Lütfen aklınıza ilk gelen kelimeleri sıralayınız.

.....

10) Intel markası bir insan olsaydı hangi özelliklere sahip olurdu?

- Kadın Erkek
Uzun boylu Kısa boylu
Şişman Zayıf
Genç Yaşlı
Eğlenceli Sıkıcı
Hareketli Sakin

11) Intel markasının kalitesi hakkında ne düşünüyorsunuz? Lütfen **1**: Ortalamanın çok altında.....**5**: Ortalamanın çok üzerinde olacak şekilde 1 ile 5 arasında puan veriniz.

Ortalamanın çok altında 1 Ortalamanın altında 2 Ortalama 3 Ortalamanın üzerinde 4 Ortalamanın çok üzerinde 5

12) Intel markasını yenilikçilik, sosyal sorumluluk ve çevre duyarlılığı kriterlerine göre değerlendiriniz.

	1 Hiç yenilikçi değil	2	3	4	5 Son derece yenilikçi
Yenilikçilik					

	1 Düşük sorumluluk	2	3	4	5 Yüksek sorumluluk
Sosyal sorumluluk					

	1 Çevreyi koruma konusuna tamamen duyarsız	2	3	4	5 Çevreyi koruma konusuna son derece duyarlı
Çevreye duyarlılık					

13) Intel markasının pazara farklı kategorilerde aşağıdaki 3 ürünü sunduğunu varsayalım. Bu ürünlerin kaliteleri hakkında ne düşünürdünüz? (Her ürün için ayrı ayrı cevaplayınız)

Lütfen **1**: Ortalamanın çok altında.....**5**: Ortalamanın çok üzerinde olacak şekilde 1 ile 5 arasında puan veriniz.

	1 Ortalamanın çok altında	2 Ortalamanın altında	3 Ortalama	4 Ortalamanın üzerinde	5 Ortalamanın çok üzerinde
Intel mp3 çalar					
Intel dizüstü bilgisayar					
Intel LCD Televizyon					

14) Intel markasının pazara sunacağı varsayılan bu ürünler ile ilgili aşağıdaki ifadeleri (her ürün için ayrı ayrı) değerlendiriniz.

Intel mp3 çalar....

	1 Hiç zor değil	2	3	4	5 Çok zor
Intel için bu ürünü üretmek					

	1 Kesinlikle katılmıyorum	2 Katılmıyorum	3 Ne katılıyorum ne katılmıyorum	4 Katılıyorum	5 Kesinlikle Katılıyorum
Bu ürünü üretmek için Intel kendi kaynaklarından faydalanabilir.					
Bu ürünü üretmek için Intel kendi yetkinliklerini kullanabilir.					

	1 Hiç ilişkili değil	2	3	4	5 Son derece ilişkili
Bu ürün diğer Intel ürünleri ile....					

	1 Hiç uyumlu değil	2	3	4	5 Son derece uyumlu
Bu ürün Intel markasının bana çağrıştırdıkları ile					

	1 Hiç niyetli değilim	2 Niyetli değilim	3 Nötr	4 Niyetliyim	5 Çok niyetliyim
Bu ürünü gelecekte satın almaya...					

Intel dizüstü bilgisayar....

	1 Hiç zor değil	2	3	4	5 Çok zor
Intel için bu ürünü üretmek					

	1 Kesinlikle katılmıyorum	2 Katılmıyorum	3 Ne katılıyorum ne katılmıyorum	4 Katılıyorum	5 Kesinlikle Katılıyorum
Bu ürünü üretmek için Intel kendi kaynaklarından faydalanabilir.					
Bu ürünü üretmek için Intel kendi yetkinliklerini kullanabilir.					

	1 Hiç ilişkili değil	2	3	4	5 Son derece ilişkili
Bu ürün diğer Intel ürünleri ile....					

	1 Hiç uyumlu değil	2	3	4	5 Son derece uyumlu
Bu ürün Intel markasının bana çağrıştırdıkları ile					

	1 Hiç niyetli değilim	2 Niyetli değilim	3 Nötr	4 Niyetliyim	5 Çok niyetliyim
Bu ürünü gelecekte satın almaya...					

Intel LCD Televizyon....

	1 Hiç zor değil	2	3	4	5 Çok zor
Intel için bu ürünü üretmek					

	1 Kesinlikle katılmıyorum	2 Katılmıyorum	3 Ne katılıyorum ne katılmıyorum	4 Katılıyorum	5 Kesinlikle Katılıyorum
Bu ürünü üretmek için Intel kendi kaynaklarından faydalanabilir.					
Bu ürünü üretmek için Intel kendi yetkinliklerini kullanabilir.					

	1 Hiç ilişkili değil	2	3	4	5 Son derece ilişkili
Bu ürün diğer Intel ürünleri ile....					

	1 Hiç uyumlu değil	2	3	4	5 Son derece uyumlu
Bu ürün Intel markasının bana çağrıştırdıkları ile					

	1 Hiç niyetli değilim	2 Niyetli değilim	3 Nötr	4 Niyetliyim	5 Çok niyetliyim
Bu ürünü gelecekte satın almaya...					

DEMOGRAFİK BÖLÜM

Cinsiyetiniz?

- Bayan
- Erkek

Yaşınız:....

Eğitim Durumunuz?

- İlköğretim mezunu
- Lise Mezunu
- Üniversite Mezunu
- Yüksek Lisans ve Üzeri

Aylık toplam hanehalkı geliri;

- 1000 TL altı
- 1001-2000 TL
- 2001-3000 TL
- 3001-4000 TL
- 4001-5000 TL
- 5000 TL üzeri

APPENDIX A.4

In the scope of Istanbul Technical University, Management Engineering graduate program, please kindly fill out the enclosed survey for an academic study, upon consumer attitudes toward a certain issue and related influencing factors. Thank you for your participation.

1) Please name 3 brands that come to your mind when you think of “plane”.

- 1.....
- 2.....
- 3.....

7) Please evaluate the following statements according to the supposed brand extensions of Boeing.

Boeing wristwatch....

	1 not at all difficult	2	3	4	5 very difficult
For Boeing, producing this product is...					

	1 Strongly disagree	2	3	4	5 Strongly agree
The competences of Boeing are useful to make this extension					
The resources of Boeing are useful to make this extension					

	1 very unrelated	2	3	4	5 very related
This product is.....to the existing products of the Boeing brand.					

	1 very inconsistent	2	3	4	5 very consistent
This product iswith my associations of the Boeing brand.					

	1 not at all likely	2	3	4	5 very likely
I amto purchase this product in the future.					

Boeing flight simulation game....

	1 not at all difficult	2	3	4	5 very difficult
For Boeing, producing this product is...					

	1 Strongly disagree	2	3	4	5 Strongly agree
The competences of Boeing are useful to make this extension					
The resources of Boeing are useful to make this extension					

	1 very unrelated	2	3	4	5 very related
This product is.....to the existing products of the Boeing brand.					

	1 very inconsistent	2	3	4	5 very consistent
This product iswith my associations of the Boeing brand.					

	1 not at all likely	2	3	4	5 very likely
I amto purchase this product in the future.					

Boeing travel luggage....

	1 not at all difficult	2	3	4	5 very difficult
For Boeing, producing this product is...					

	1 Strongly disagree	2	3	4	5 Strongly agree
The competences of Boeing are useful to make this extension					
The resources of Boeing are useful to make this extension					

	1 very unrelated	2	3	4	5 very related
This product is.....to the existing products of the Boeing brand.					

	1 very inconsistent	2	3	4	5 very consistent
This product iswith my associations of the Boeing brand.					

	1 not at all likely	2	3	4	5 very likely
I amto purchase this product in the future.					

8) Please name 3 brands that come to your mind when you think of “computer”.

1.....

2.....

3.....

	1 Strongly disagree	2	3	4	5 Strongly agree
The competences of Intel are useful to make this extension					
The resources of Intel are useful to make this extension					

	1 very unrelated	2	3	4	5 very related
This product is.....to the existing products of the Intel brand.					

	1 very inconsistent	2	3	4	5 very consistent
This product iswith my associations of the Intel brand.					

	1 not at all likely	2	3	4	5 very likely
I amto purchase this product in the future.					

Intel notebook...

	1 not at all difficult	2	3	4	5 very difficult
For Intel, producing this product is...					

	1 Strongly disagree	2	3	4	5 Strongly agree
The competences of Intel are useful to make this extension					
The resources of Intel are useful to make this extension					

	1 very unrelated	2	3	4	5 very related
This product is.....to the existing products of the Intel brand.					

	1 very inconsistent	2	3	4	5 very consistent
This product iswith my associations of the Intel brand.					

	1 not at all likely	2	3	4	5 very likely
I amto purchase this product in the future.					

Intel LCD Television....

	1 not at all difficult	2	3	4	5 very difficult
For Intel, producing this product is...					

	1 Strongly disagree	2	3	4	5 Strongly agree
The competences of Intel are useful to make this extension					
The resources of Intel are useful to make this extension					

	1 very unrelated	2	3	4	5 very related
This product is.....to the existing products of the Intel brand.					

	1 very inconsistent	2	3	4	5 very consistent
This product iswith my associations of the Intel brand.					

	1 not at all likely	2	3	4	5 very likely
I amto purchase this product in the future.					

DEMOGRAPHIC INFORMATION

Gender?

- Male
- Female

Age:....

Education...

- Primary graduate
- High school graduate
- University graduate
- Master's and above

Total monthly household income;

- Below 1000 TL
- 1001-2000 TL
- 2001-3000 TL
- 3001-4000 TL
- 4001-5000 TL
- Above 5000 TL

CURRICULUM VITA



Candidate's full name: PINAR BİLGİN

Place and date of birth: İSTANBUL, 02.01.1985

Permanent Address: Ulus Mah. Öztopuz Cad. Yavuz Sk. No: 12/5 Ulus-Beşiktaş-İSTANBUL

Universities and

Colleges attended: İ.T.U Chemistry and Metallurgical Faculty, Chemical Engineering (2002-2006)