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How global are global brands?

An empirical brand equity analysis

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Preface

The term "global brand" has become a widely used term: Business Week publishes annually its well known ranking of the "Best Global Brands". Consumers who travel find their favorite brands also in stores in foreign countries. Although media and consumers call these brands "global" and centralized marketing departments manage these brands globally – are these "global brands" really global? Are they truly perceived everywhere in the same way by the customers? Can we talk about global brand equity? Is the brand image the same in different countries?

The authors conducted an empirical research with more than 700 students in Germany and Mexico in order to compare the global brand Apple ipod in the two countries (research period: May to June 2009). The goal was to identify if brand awareness or brand image of the Apple iPod differ between the two countries within a homogenous consumer group. In addition, influencing factors were identified to explain any differences. The results show that brand image perception in Germany and Mexico is quite different – even for such a "global brand" as the Apple ipod. The results question strictly standardized marketing instruments which global brand management teams in many consumer goods companies use for its presumable "global brands". Differences in brand equity suggest that a more differentiated approach that takes into account specific local brand images might be more suitable for "global brands" who turn out not to be so global.

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List of Abbreviations and Symbols

bn	billion
CAA	Corporation Ability Association
COO	Country-of-origin
DK	"Don't know" (answer alternative)
e.g.	for example
et al.	and others
H	Hypothesis
i.e.	that means
Inc.	incorporated
MP3	MPEG-1 Audio-Layer-3
pp.	pages
resp.	respectively
SPSS	Statistical Package for the Social Sciences
vs.	versus

Abstract

The term "global brand" has become widely used by the media and by consumers. Business week publishes annually its widely known ranking of the "Best Global Brands" (with Coca-Cola as number 1 in the past years) and consumers on summer vacations purchase brands such as Heineken or Marlboro they are familiar with from their home country. Although media and consumers call these brands "global" and centralized marketing departments manage these brands globally – are these "global brands" really global? Are they really perceived everywhere in the same way by the customers? Can we talk about truly global brand equity? And if there were brand image differences between countries, which factors causes them? The authors conducted an empirical research during May and June 2009 with similarly aged University students (bachelor students at business school) in Germany (n=426) and Mexico (n=296). The goal was to identify if brand awareness rates differ between Germans and Mexicans, if the brand image of Apple iPod is perceived in the same way in Germany and in Mexico and what influencing factors might have an impact on any brand image discrepancy between the countries. Results prove that brand recall rates differ between the two countries (with higher rates in Mexico) as well as brand image attributes vary significantly (28 out of 34 brand image attributes are significantly different between Germany and Mexico), with Mexico showing higher levels of favorable brand image attributes. Key influencing factors on the different brand image perceptions are perceived quality, satisfaction and the influence of reference groups (such as friends and family). The results suggest that so-called "global brands" are not perceived the same way in Germany and Mexico. As a consequence, brand management using standardized marketing instruments for its presumable "global brands" might be better off with a more differentiated approach that takes account a specific local brand image.

Keywords: Global Marketing; Global Brand; Brand Equity; Brand Image; Brand Awareness; Brand Analysis; Cross-country Comparison

JEL-Classification: C21, M31

1   Introduction

The reasons for going global are manifold: The attractiveness of new and growing markets, the benefit of economies of scale and scope in research and development and production, and the removal and reduction of barriers between national boundaries in order to facilitate the flow of goods, capital, services and labor - to name just a few (Holt et al. 2004).

When companies go global, two extreme ways how to handle international marketing are possible: On the one hand, companies customize their brands according to the special needs and habits of the people living in the marketed country by using a differentiation strategy. On the other hand, companies can apply the same marketing as in their home country in the foreign market following a standardization strategy. However, a company does not have to decide between the both extremes – differentiation or standardization. Many companies choose a "mixed" approach, which means they might follow a standardized strategy for the core elements of their brands, however, when there are evident benefits in adapting these to the local needs, companies do so (Riesenbeck and Freeling 1991, p. 14). For instance, McDonald's, the world's largest chain of fast food restaurants, sticks to its core hamburger business around the world, while it customizes its products to the tastes and preferences of the country where the products are sold. E.g. in Germany McDonald's serves beer, in France wine, and tropical mint shakes in Hong Kong. Moreover, also the dishes vary from one country to another. In India, hamburgers are sold with mutton meat instead of beef due to religious beliefs of the customers (Keller 2008, p. 602). Similarly, Bacardi standardized its product and brand name, whereas packaging, positioning, advertising and pricing show local adaptations (Riesenbeck and Freeling 1991, p. 13).

Therefore truly global brands with completely standardized marketing hardly exist. Nevertheless, brands such as Coca-Cola, McDonald's and Apple are constantly being named global brands by media and literature. For instances, De Mooij (2005, p. 14) talks about Coca-Cola as a global "megabrand, Business Week publishes annual rankings of the best global brands including all of the three. The same is true for other magazines. In Fortune's survey "The world's Most Admired Companies 2009" Apple was voted at the first place and Coca-Cola and McDonald's at the twelfth and sixteenths. Keller (2008, p. 599) states that "[…] other critics pointed out that even Coca-Cola did not standardize its marketing and noted the lack of standardization in other leading global brands, such as McDonald's and Marlboro". Taking Coca-Cola as an example, one can see that the company tailors the flavor, packaging, price, and advertising to meet consumers' taste in specific markets and is successful with this approach. Although Coke commercials are largely standardized, it makes minor modifications to the way it presents itself in each country, even if it is just a translation to the local language (Keller 2008, p. 600 and Solomon 2008, p. 669). However, Coca-Cola is regarded as THE global brand – by the company itself, the media and its customers (De Mooij 2005). A German customer being on holidays in Mexico will find the Coke he or she is familiar with, even though the soft drink is sold in a can instead of a bottle and the taste differs a little due to a different recipe or locally sources ingredients. These slight differences might be unlikely to influence the image the consumer has of the brand. But even though a local consumer might have a certain image of a brand, does this automatically mean that a consumer of another country has the same perception of this brand? And if not, what are the reasons for these different brand images?

The following study will try to give answers to these questions. The researchers decided to take students from two different countries, namely Germany and Mexico, for a brand equity analysis of the brand iPod. The study was conducted in a joint research effort between Pforzheim University in Germany and Tecnólogico de Monterrey in Mexico during summer 2009.

2   Theory on Global Brands

2.1   Definition of a Global Brand

Every year several brand consultants and advertising agencies compile annual lists and rankings of the most valuable global brands, as for example the Global Branding Consultancy Interbrand (2009) with its "The best global brands" or Business Week's "The world's best brands". These studies focus on the brand value, that means the financial and psychological asset of the brand, and compare these calculated assets with other brands to come up with different rankings. However, which factors make a brand global and how can it be defined? Unfortunately, when searching for a definition of a global brand, one can hardly find something adequate. The current literature offers only limited insights into what a global brand means, how its globalness can be measured, what consumer attitudes drive toward global brands, and why and when consumers are more likely to purchase global brands (Özsomer and Altaras 2008, p. 2). Dimofte et al. (2008) tried to define global brands through a qualitative and quantitative study where U.S. students had to list the first three characteristics that came to their mind when thinking about global brands. Then a survey questionnaire was developed with a set of 56 Likert items to represent the listed characteristics of global brands and respondents had to state their degree of agreement with the given characteristics.

Global brands are described by several requirements they need to have to be global which is supported by many examples. Considering the outcomes of Dimofte et al.'s study and additional recent literature, it can be said, that a global brand has the following characteristics.

Global brands are virtually all global in reach, which means they must be available all over the world. According to ACNielsen (2001) a global brand has to be present in the four major regions of the world with at least 5% of sales coming from outside the home region, and total revenues of at least 1bn. In addition, Özsomer and Altaras (2008, p. 1) argue that global brands have "widespread regional/global awareness, availability, acceptance, and demand". Also, the company follows a globally integrated marketing strategy and adopts one brand name around the world (Johansson and Ronkainen 2005, p. 339 and De Mooij 2005, p. 14). Consequently, the brand has a "consistent positioning, personality, look, and feel in major markets" (Özsomer and Altaras 2008, p. 1) enabled through these programs and benefiting from a unique perceived image worldwide. Moreover, status, esteem and thus equity rise with globality, which means that the globality of a brand is positively related to perceived quality, prestige and purchase likelihood (Johansson and Ronkainen 2005, p. 339).

In summary, a global brand may be defined by three criteria. At first, it needs to have global awareness and recognition, which requires that the brand has a multi-market reach and is globally available. Second, it requests a global brand image that means it has to be perceived as the same brand worldwide both by consumers and other stakeholders owing to its standardization across

markets. Third, a global brand enjoys high brand equity due to its financial assets, perceived quality and esteem.

2.2   Definition of Brand Dimensions

Many authors have engaged themselves in the analysis of the description and composition of brands and developed implications and strategies for companies to accomplish a successful brand management. However, a deep literature review revealed that mainly the authors Kevin Lane Keller, David A. Aaker, his daughter Jennifer L. Aaker (1997) and Jean-Noel Kapferer (2005) have established the basis for all successive theoretical works and research studies. Therefore, they can be seen as the main drivers and experts in separating a brand into its brand dimensions and explaining how these sub-factors contribute to the creation of a strong brand. As many studies largely refer to one or more of these previous mentioned authors, this study will also be based on their works and especially on Keller (2008) and Aaker (1996).

These two authors have very similar ideas about the elements of a brand according to how they identify and define them. Even though slight differences can be explored concerning the determination of components which contribute to the equity of a brand, the authors define most of the dimensions in the same way. The following list contains a summary, which was accomplished by combining the individual elements of Keller's and Aaker's definitions in a general one we used in the study.

- *Brand equity* is a consumer's subjective evaluation of a brand. The main sources for brand equity are brand awareness and brand image. Brand equity creates value for the consumer as well as for the company. However, if the term brand equity is used in this study, it is referred to as customer-based brand equity, i.e. the assets for the consumer and not to the brand's financial value (Keller 2008, pp. 48 and Aaker 1996, pp. 7).

- The brand elements[1] and associations defined by the brand managers responsible for the brand result in the *brand identity*. Thus, brand identity reflects how the company wants the brand to be seen by its customers (Keller 2008, p. 174; Aaker 1996, p. 68; Aaker and Joachimsthaler 2000, p. 23).

- *Brand knowledge*, which contains brand awareness and brand image, is the key to creating brand equity and it represents everything a customer knows about a brand (Keller 2008, p. 51; Keller 1993, pp.2).

- *Brand awareness* refers to the strength of a brand's presence in consumer's memory and defines the ability of identification of this brand. The two main components of brand awareness are brand recall with its sublevels and brand recognition (Keller 2008, pp. 51 and Aaker 1996, p. 10).

- *Brand recognition* means that the customer is able to affirm previous exposure to that brand when provided with a list of brand names and the recognition might even offer an approximation of potential recall-ability (Keller 2008, p. 54 and Aaker 1996, p. 10).

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[1] Brand elements are defined as "those trademarkable devices that identify and differentiate the brand.", e.g. brand name, URL, logo, symbol, slogans (Keller 2008, p. 176)

- *Brand recall* means that the consumer is familiar with the brand and can recall it when the product category is given. Moreover, if the customer can recall a brand, he or she is definitely able to recognize it (Keller 2008, p. 54 and Aaker 1996, p. 11).

- *Brand image* represents the perception of a brand by its consumer and it is reflected by brand associations (Keller 2008, p. 51 and Aaker 1996, pp. 69).

- *Brand associations* contain the meaning of the brand for the consumer and reflect his perception of the brand (Keller 2008, p. 51 and Aaker 1991, p. 109).

- *Brand personality* contains the human characteristics which a consumer associates with the brand (Keller 2008, p. 369 and Aaker 1996, p. 141).

- *Brand attitude* contains the consumer's overall opinion toward a brand – whether it is positive or negative – which can result in trust and loyalty when positive (Keller 1993, pp. 7 and Aaker and Biel 1993, pp. 121).

2.3 Brand Dimensions in the global context

Existing research on international brands has already examined the impact on brand perception. Several studies can be found which analyze the impact of culture and country-of-origin (COO) effects on brand equity and brand image - both uni-national (cf. Koubaa 2008; Nebenzahl and Jaffe 1996; Yasin et al. 2007) and cross-national (cf. Foscht et al. 2008; Lee et al. 2008a; Gannon 2004) - finding that cultural differences have an impact on the perception of a brand. Foscht et al. (2008) used Hofstede's (1984) cultural dimensions and Aaker's brand personality dimensions to examine whether cultural differences affect the perception of a brand. The study provides clear evidence that the same brand is perceived differently in diverse cultures in spite of its identical positioning. Moreover, Yaprak (2008) critically reviews earlier and current approaches to culture study in international marketing and highlights shortcomings of them. At the end of his review paper, he represents suggestions for remedies and future development.

Since culture and COO have already been thoroughly investigated, the study of "How global are global brands?" excludes these two factors and instead raises the questions: "Is the brand image of a global brand perceived in the same way all over the world by its customers?" and "are there further factors besides culture and COO which have an impact on the perception of the brand image in different countries?" Therefore, the most important and relevant studies for the analysis of the question "how global are global brands?" were collected and organized in the subsequent two categories.

Empirical National Studies

A national study, utilizing Aaker's and Keller's theoretical framework of brand equity, found that corporation ability association (CAA) is an important factor in building and preserving brand equity and that CAA and brand awareness have an impact on quality perception (Wang et al. 2008). Moreover, Pappu et al. (2005) empirically affirmed Aaker's theoretical model of brand equity with its four dimensions[2] brand awareness, brand associations, perceived quality, and brand loyalty. In

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[2] Aaker's brand equity model originally consists of five dimensions with „other proprietary assets" being the fifth one; however this dimension is often not empirically investigated.

addition, Low and Lamb (2000) investigated the query if the constructs brand image, brand attitude, and perceived quality are three separate, related dimensions or if they are simply different indicators of brand associations. The conclusion of their study is that well-known brands tend to exhibit multi-dimensional brand associations[3], consistent with the idea that consumers have more developed memory structures for more familiar brands.

Empirical Cross-National Studies

Many cross-national studies have already analyzed influencing factors on brand equity and its sub-dimensions or vice versa, finding the following relationships:

First, Esch et al. (2006) developed a comprehensive model that combines brand knowledge and brand relationship perspectives on brands showing that current purchases are affected by brand image mostly directly and by brand awareness mostly indirectly, whereas future purchases are not affected by either dimension of brand knowledge directly.

Second, Hsieh (2006) raised the question whether consumers from different markets perceive brands differently and, consequently, how the brand image perception affects consumers' purchasing behavior across nations. In his cross-national research study, he identified brand image dimensionality and measured the degree of brand globalization. He found, that brand image perception is built on consumers' brand association and attitude. Moreover, Hsieh detected that brand image dimensions and the strength and uniqueness of associations that constitute image dimensions differentiate one brand from another in memory.

Third, Yoo (2009) found that both brand loyalty and equity was higher among people of high collectivism than those of low collectivism. Due to these findings he concluded that regardless of the national culture, collectivist consumers would show higher brand loyalty and equity than individualist consumers.

Fourth, Jung and Sung (2008) compared the consumer-based brand equity of apparel products by three consumer groups across cultures and explored that in the relationship between elements of brand equity and purchase intention, brand loyalty showed positive correlation with purchase intention across all consumer groups.

Fifth, Ataman and Ülengin (2003) investigated the relationship between the sales volume of a firm and its brand image and confirmed their hypothesis empirically. Hence, the changes in the perception of brand image may cause changes in brand preferences and affects the variation in sales.

Sixth, Lee et al. (2008a) investigated the question how consumers in three differently developed countries perceive a US global brand versus domestic brands. For this purpose they developed a model being composed of three components – brand-specific association, consisting of emotional value and perceived quality, general brand impression, including brand awareness and brand image and customer commitment, referring to purchase intention and brand loyalty. Their findings revealed significant main effects of country and brand type (global vs. domestic) on the three components and also proved interactive effects on brand-specific associations, general brand impressions, and brand loyalty.

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[3]　Multi-dimensional means that constructs such as brand attitudes and perceived quality are separate dimensions of brand associations whereas the term uni-dimensional implies that these constructs are simply indicators of brand associations.

2.4 The Brand Equity Model

Since the investigation of all brand dimensions would have been too complex to use in an empirical study, the number of dimensions needed to be reduced. The following system of equations shows which dimensions in the brand equity model the researchers have finally decided on, after having compared the different definitions stated by Keller and Aaker.

(1) Brand Equity =   f(Brand Awareness; Brand Image; Influencing Factors)
(2) Brand Awareness =   f(Brand Recall; Brand Recognition)
(3) Brand Image =   f(Brand Attitude; Brand Personality; Brand Association)
(4) Influencing Factors =   f(Customer Commitment; Usage Rate; Reference Groups)
(5) Brand Association =   f(Functional Association; Emotional Association)
(6) Customer Commitment= f(Perceived Quality; Satisfaction; Purchase Intention; Brand Loyalty)

Moreover, the equations demonstrate the relationships and components of the different brand dimensions which have been taken as a basis for the development of the survey instrument. For the most part, Keller's (2008, pp.51-59) customer-based brand equity model was utilized as origin, saying that brand knowledge - with its two components brand awareness and brand image - is the key to creating brand equity. However, Keller's brand image model consists of brand associations which are further sub-divided into attributes, benefits and attitudes. This classification was slightly modified respectively renamed for the purpose of this study. Instead of attributes, the term *brand personality* (Mäder 2004, pp.3) was chosen to evaluate human characteristics of the brand. Benefits were separated into *functional* (Low and Lamb 2000, pp. 352) and *emotional* (Bullmore 1984) *brand associations* which consumers attach to a specific brand and from which they benefit. Nevertheless, the term attitude was kept and only renamed into *brand attitude.*

The next step was to combine Keller's framework with influencing factors of other theoretical models: The factors *brand loyalty* and *perceived quality* were extended by two more sublevels of customer commitment - namely *satisfaction and purchase intention* - and two additional influencing factors, particularly *usage rate* and *influence by reference groups* (Keller 2008, p. 670; Lee et al. 2008a; Jung and Sung 2008, p. 25). Perceived quality, satisfaction, purchase intention, and brand loyalty were subordinated to customer commitment. In conclusion, the three influencing factors on brand equity which were chosen by the researchers were: *customer commitment* with its sub-dimensions, *customer commitment*, *usage rate* and *influence by reference groups*. The system of equations above shows the complete framework which was used to develop the main and auxiliary hypotheses, and hence prove them through the conduction of the survey with a self-administered questionnaire.

3 The Brand Equity Analysis

3.1 The Sample of the Study

For the conduction of the investigation, the research sample and its size had to be defined. Due to the fact that the study was conducted in the frame of a research project of Pforzheim University in

Germany in cooperation with Tecnólogico de Monterrey in Mexico, the authors decided to use German as well as Mexican students for this research study. According to the sample size of other studies taking students as sample, the number of interviewees being part of the brand analysis of Apple was defined to be around 300 per country. The sample size of these studies was about 172 (Foscht et al. 2008), 275 (Lee et al. 2008a) and even 400 (Esch et al. 2006) per country. The selection of students was appropriate due to the following reasons:

First, previous studies have shown that the choice of students as a sample is highly convenient and very often used. Consequently, the comparison of results between the different studies using students as a sample is possible and easy. Second, research indicates that young people are more open to new ideas and innovation. Furthermore, they are more similar to their peers worldwide in their wants and needs than other age groups (Foscht et al. 2008, p. 134). Third, only students were asked because a comparison of countries should always be based on people with the same education and occupation. Above all, students are in a certain age range. Finally, students are easy to reach by the researchers by visiting classes and lectures where the same majors - in this study business and management - are assembled. The choice of particular majors should further contribute to the homogeneity of the sample. However, one has to bear in mind, that although the selected German and Mexican students are relatively homogeneous in terms of important demographics as age and educational background, they still differ in terms of language, social background and cultural frames of reference. Even though Mexico is an emerging country and Germany a developed industrial nation, the situation at the two chosen universities is vice versa. The German students attend Pforzheim University which is public, whereas the Mexican students are studying at the private university Tecnólogico de Monterrey, thus having to pay high tuition fees for their studies. Furthermore, students from only one university per nation did serve as representatives for the consumers of the whole country. In conclusion, the difference between the students and the resulting limited representativeness has to be considered by the later analysis of the results and the comparison of these two countries.

3.2　Required Conditions for the Investigated Brand

For the purpose of this study, the investigated brand had to satisfy the following prerequisites:

1. The brand needs to be global
2. Students all over the world must be highly familiar with the brand
3. The brand should not be over-investigated

Although the initial purpose of the study was to explore whether Apple has a global brand equity, the brand iPod was chosen for investigation. The reason for this choice is that Apple's product-portfolio encompasses both, software and consumer electronics like Macintosh computers, the iPod and the iPhone. Thus, if asked about Apple, the respondents would probably have different products in mind while answering the questionnaire, resulting most likely in different brand images of Apple. Therefore, it was decided to use the well-known brand iPod for the investigation and transferring the results on the umbrella brand Apple. The following part will now deal with the analysis of whether Apple respectively the brand iPod fulfills the previous defined requirements.

3.2.1   Globality of Apple and iPod

As analyzed in *chapter 1.3*, global brands are defined as brands that have similar image and associations all over the world, hence also a global brand identity. Since Apple does not communicate its brand identity publicly[4], the iPod's marketing-mix and previous campaigns need to be analyzed to assess if the iPod brand is suitable for a further analysis.

There are four different versions of the iPod, namely in order of their first introduction and its successive generations: iPod classic, which was previously named just iPod, the iPod Shuffle, the iPod nano, and the iPod touch. All these products are globally standardized without national customizations in product features or design. Moreover, they carry the same brand name and logo worldwide. Only the introduction dates differ from one country to another. Furthermore, Apple positions its iPods on a global level by stressing always the same benefits in its product descriptions, e.g., their brilliance, ease-of-use and multifunctionality. Apple even calls them "Fashion tech-cessory", emphasizing their trendy design combined with innovative technology features and its use as a lifestyle accessory. In conclusion, it can be said that Apple has a global product strategy.

Apple's products are premium products and therefore are most often priced above competition (Verma 2006, p. 8). According to van Gelder (2003, p. 169), price is the marketing mix element that is most likely to vary between countries, especially as prices are set relative to local prices of similar products. Comparing the current prices of iPods in the Apple online store reveals that the prices actually differ from country to country.[5] In conclusion, as the marketing-mix can vary according to De Mooij's (2005, p. 14) definition of a global brand, one can only conclude that Apple has a common global premium price strategy for its iPods, that actual retail prices however vary.

Besides its online store, the company has also created 200 retail stores worldwide to foster excitement for the brand, as people can touch and experience the products in the stores. Tech-savvy customers, as well as ordinary visitors are targeted with in-store product presentations and workshops, a full line of Apple products, software, and accessories, and a "Genius Bar" staffed by Apple specialists who provide technical support (Wingfield 2006). Moreover, Apple is also widely available in developed countries at "big box mass electronic" retailers (Kotler and Keller 2009, p. 631), however in less-developed countries with less sophisticated retail structures this channel is largely missing. Therefore, Apple's distribution varies from one country to another because of the "need to adapt to local structures and conventions" (van Gelder 2003, p. 170). In conclusion, Apple can guarantee the global availability of iPods through the adaptation of distribution channels to national practices.

In addition, the homepage of Apple has the same layout and content all over the world, except of some country-specific distinctions. Between 2001 and 2005, Apple spent over $200 million on advertising iPod, outspending Sony, iRiver, and Creative, combined by more than 20 times (Lustgarten, 2005, pp. 154). For the 1984 Super Bowl, Apple developed one of the most famous television commercials of all times, in which a young woman breaks away from the ground and

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4   Reppel et al. (2006) also mention Apple's fame for its secrecy and that any attempt to investigate the company's capabilities is seriously constrained.

5   The prices of the 120 GB iPod classic in the online stores of the USA ($249), Japan ($310), China ($322), Australia ($273), Germany ($334) and Mexico ($291) have been compared in US-dollar by taking the current currency rate of these countries, accessed June 21st, 2009.

tossing a hammer through an image which was used to program everyone to behave the same. Even though the ad ran only once, it positioned Apple forever as an innovator (Blackwell et al. 2006, p. 16). From 1997 to 2002, Apple presented its "Think different" campaign, which brought together image of people who dared to "think different" as Albert Einstein, Dalai Lama, Muhammad Ali, and many more (Bedbury and Fenichell 2003, p. 57). In 2002, this campaign was discontinued by the launch of Apple's "Real People" (Apple Inc. URL2) ad campaign, featuring people who have switched from PCs to the Macintosh. The campaign contained eight different television ads, each highlighting a different "switcher" telling their story. Since 2006 the recent "Get a Mac" campaign runs, where two men stand in front of a plain white background and discuss the many advantages of using a Mac, communicating the superiority of Apple in a simple and entertaining way. The ads are shown on three different channels, such as on television in various countries, on the Apple's "Get a Mac"-Site and in several flash ads, which have been shown exclusively on numerous web pages. Moreover, in some countries (e.g. Japan and UK) the actors of the PC and the MAC in the USA commercials are replaced by local comedians and celebrities. In conclusion, comparing the various campaigns with their print ads, television commercials, and online presence, one can discover that Apple always uses the same tonality, image, and message in its advertisements to communicate with its customers: Simplicity, innovation and superiority combined with humor and coolness. Moreover, Apple uses people from different national, professional and historical backgrounds in its campaigns, which enhances the company's global image.

In 2005, the iPod "Silhouettes" - the year's most effective advertising campaign - ran all over the world, designed to appeal to current fans, as well as to people who had not been Apple product users at that time. This massive campaign included not only a television commercial featuring people in silhouette listening to iPods and dancing in front of neon backgrounds, but also similar images were used for the print ads, billboards and posters. Initial advertisements focused on product features, whereas the later ad campaigns "managed to turn the human silhouette, a cubic box, and even the colour white into symbols of Apple" (Verma, M. 2006, p. 9). The advantage of the campaign was the use of various black silhouettes which made the anonymous dancers with their white iPods less identifiable. Consequently, this approach furthered the consumer's belief that they can be one of them – no matter of age, nationality or social background.

It can be concluded from these campaigns, that Apple follows a global promotion and positioning strategy by enhancing the same image all over the world, always stressing the benefits of its products, which distinguish it from its competitors.

Overall, it can be concluded, that Apple follows with its iPod brand a rather global standardized brand management approach: whenever suitable global standardization is conducted (such as product homogeneity, same brand positioning around the world, global premium price strategy, global advertising campaigns, global flagship stores), and only where local circumstances require it, the marketing is differentiated (such as selling through local retailers or price setting due to local competitor prices).

3.2.2   Familiarity with the Brand iPod among Students

In order to successfully conduct the empirical research, the students have to know the brand and to be familiar with it. Unless this prerequisite is not fulfilled, a consumer cannot develop a perception of the brand and thus no brand image. Therefore, the following part will deal with the familiarity of iPod among students.

Since iPod is the best selling MP3 player and known all over the world, the brand is popular among students (Reppel et al. 2006, p. 240). Moreover, Apple sells its products to schools and universities, so that students get "comfortable with the interface and familiar with the superior performance the brand offers" (Nightingale and Syed 2008, p. 8). At Tecnólogico de Monterrey, there is even an authorized "Campus Store", where students can purchase the entire range of Apple products (Anon 2009). "The popularity of iPod music player has also brought a new young generation of consumers who see this music player as a trendy item and have completely different patterns of demand and consumption of music." (Kunze and Mai 2007, p. 863) Apple defined a broad access point for the target market of the iPod – "music lovers who wanted their music, whenever and wherever" (Kotler and Keller 2009, p. 631), which appealed to Mac fans, as well as people who had not used Apple products in the past. In conclusion, students represent the target market of the iPod, therefore, they should be highly familiar with this brand.

3.2.3   Previous Investigations about the Brand iPod

Research papers dealing with the brand image of iPod have been collected and compared with the present study to see what has already been done and what might be possibilities of further research. There exist several theoretical papers on Apple's marketing strategies, brand extensions and success story. However, they do not include empirical investigations about the brands image or its globality. All in all, only one relevant empirical research paper, namely "The iPod phenomenon: identifying a market leader's secrets through qualitative marketing research" (Reppel et al. 2006) was found, which was taken as a basis for this study. Since Apple has not been over-investigated so far, the brand is suitable for further researches.

In Reppel et al.'s (2006) study, the laddering technique was used to identify the preferred attributes of the iPod that German consumers value by combining quantitative and qualitative research methods. The objective was to understand how the product is used by the consumer and how attributes are evaluated by them. The findings revealed that German iPod consumers prefer attributes as "control elements", "ease of use" and "design".

Comparing the two studies "The iPod phenomenon: identifying a market leader's secrets through qualitative marketing research" and the present study, the following differences can be detected:

First, the present study does not only aim at getting an idea of how the consumers of the brand iPod perceive the brand, but also how the consumers of competitor products see it. Moreover, a model to explain influencing factors on brand image, and hence the measurement of the globalness of a brand should be developed. Second, instead of conducting the survey online through "text-based online laddering chats" as in the Reppel et al. study, a self-administered questionnaire was developed to be conducted. Third, this study is cross-national, thus not only students from Germany, but also from Mexico built the sample. Fourth, instead of filtering opinion leaders as

Reppel et al. did, the easiest sampling process, namely asking business students of two universities was chosen for this study. Fifth, only quantitative research was done in this study due to a tight time frame.

In conclusion, the research paper of Reppel et al. showed a first attempt to use attributes named by consumers of iPod and have respondents rate them afterwards. This approach formed also the main part in the self-administered questionnaire of this study with the aim to get an idea of the brand equity which iPod users and non-users have of the brand. Moreover, through the rating of various attributes by German as well as Mexican consumers, differences between German and Mexican consumers should be detected.

3.3   Main Hypotheses of the Brand Equity Analysis of iPod

According to Keller, "customer-based brand equity occurs when the consumer has a high level of awareness and familiarity with the brand and holds some favorable and unique brand associations in memory" (Keller 2008, p. 53). Hence, the awareness and the familiarity among Germans and Mexicans with the brand Apple iPod - the best selling MP3 player, which is known all over the world - had to be explored (Reppel et al. 2006, p. 240).

In Germany 71 percent of the German population from 14 to 69 year olds have heard of Apple Inc. and the market share of iPod is 21 percent (Institut für Demoskopie Allensbach (URL); dcn (URL); Jung (URL). Whereas in Mexico 90 percent have heard of Apple and iPod's market share is about 30 percent (Wittman and Scott 2006, pp. 10). Hence, both countries seem to be familiar with the brand and would probably be able to recognize it. However, especially as brand awareness and market share of iPod are higher in Mexico than in Germany, the latter are expected to recall it less than Mexicans do. Another factor to consider is brand usage. Theoretically, consumers who use the brand more often will memorize it easier than the ones using it not that often. Since Mexicans use their MP3 players more often than Germans do (Wittman and Scott 2006, pp. 10), it is assumable that brand recall of both countries will differ significantly.

Consequently, when asking Mexican and German students to name an MP3 player brand, it is assumed that iPod is mentioned less often by the Germans.

H1$_A$: Brand recall of iPod differs in Germany vs. Mexico

Brand image is a complex brand dimension which is separated into *brand attitude*, *functional brand associations*, *emotional brand associations*, and *brand personality*. Consequently, each of these sub-dimensions will be analyzed in the study and for that reason hypotheses for all of them were developed and are explained in the following.

According to Hofstede (1984), Germans are individualistic people who rather prefer products "made in Germany" and who consider the individual's benefit to be more important than the group's benefit (Bos 1994). On the contrary, Mexicans believe that American products are better than their own ones and they are extremely group - and status oriented (Herbig and Genestre 1996, pp. 55; Lee et al. 2008a, p. 170). One the one hand, the iPod is an US product which makes it more attractive for Mexicans in any case. On the other hand, research has shown that iPods cause the wish to own

one in order to belong to a group or to be cool (Wiedemann 2006, pp. 55) and this aspiration effect is supposed to be stronger among Mexicans than Germans. According to these given differences concerning attitude, it is assumed that the brand attitude of iPod will be different in these two countries. Therefore the following is assumed:

H2.1$_A$: Brand attitude of iPod differs in Germany vs. Mexico

When it comes to advertising, Germans prefer facts and a lot of information (Seitz and Handojo 1997, p. 173). Moreover, they are said to be rational and to compare rankings or receive expert information before buying high-involvement products. Latest research finds Germans to be extremely price sensitive and less concerned about brands. Furthermore, Germans are thoughtful consumers who are rationally thinking about their behavior and actions as consumers.

On the contrary, Mexicans like emotional advertising and they are known to purchase products which show a certain status such as an iPod (Seitz and Handojo 1997, p. 173). They are emotional and group oriented customers, as their family plays an essential role in their lives (Gannon 2004, p. 133). When it comes to purchase decisions, they rather consult their friends or family members for recommendations than comparing rankings. Hence, it can be assumed that Mexicans are quite emotionally thinking.

In conclusion, due to the different approaches how Germans respectively Mexicans tend to buy high-involvement products, the researchers assume that the evaluation of the functional and emotional brand associations of iPod will be different in these two countries. Hence, the according hypotheses are:

H2.2$_A$: Functional brand associations of iPod differ in Germany vs. Mexico
H2.3$_A$: Emotional brand associations of iPod differ in Germany vs. Mexico

Finally, a closer look was taken at the dimension brand personality. Apple's slogan for its iPod shuffle is "the first music player that talks to you" and it also asks the visitors of its homepage the question "which iPod are you?" which means Apple personifies its iPods and gives it personal features instead of praising its technical ones. Consumers and non-consumers are invited to identify themselves with one of the four iPod versions. Moreover, devoted users fit their tiny round music boxes with everything from socks and mohair slipcovers to "hoodie" sweatshirts and stick-on tattoos (Solomon 2008, p. 277). The company has created a product that is having culture-shifting effects and is changing the way people listen to music. Hence, the questionnaire also contained a brand personality section asking the students about human characteristics of the iPod.

Presumably, Germans and Mexicans will have different expectations towards iPod. Germans might tend to prefer practical characteristics, whereas the Mexican students are surrounded with iPods every day due to the fact that there is also an Apple retail store at Tecnólogico de Monterrey, hence, they might see their iPods not only as a music player device but also as a lifestyle accessory. In summary, it is assumed that brand personality will be different in Germany and Mexico due to the overall perception of the product iPod.

H2.4_A: Brand personality of iPod differs in Germany vs. Mexico

The previous analyzed dimensions *brand attitude*, *functional* and *emotional brand associations* and *brand personality* are the sub-dimensions belonging to *brand image*. Thus, it is assumed that also *brand image*, as being influenced by all these sub-elements, differs in Germany and in Mexico.

H2_A: Brand image of iPod differs in Germany and Mexico

In conclusion, it is assumed that although the awareness and identity of global brands might be the same in different countries, global brands are perceived differently among its (potential) customers. Reasons are to find in culture, attitudes, usage rate and social influence by reference groups, which lead to the auxiliary hypotheses which are to be proven by means of the questionnaire (Foscht et al. 2008).

3.4   Auxiliary Hypotheses of the Influencing Factors of iPod's Brand Equity

The following part deals with the development of auxiliary hypotheses to achieve the second goal of the study, namely, to prove the impact of the influencing factors on brand equity and their differences between Germany and Mexico. According to Keller, brand image is one sub-dimension of brand equity besides brand awareness. Consequently, if an impact on brand image by the influencing factors can be explored, the conclusion can be drawn that they will thereby also affect brand equity.

The factor *customer commitment* was previously defined to contain the four elements *perceived quality*, *satisfaction*, *purchase intention*, and *brand loyalty* thus, each of them had to be analyzed in the study.

Perceived quality is the consumer's subjective evaluation of the product and it increases the purchase intention as it provides value to the consumer. Consequently, it can be said that the perception of a product's quality leads to the differentiation of the according brand from competing brands (Lee et al. 2008a, pp. 165). Before a consumer purchases a high-involvement product, he or she will most likely compare it with competing products and ask other people in his surrounding about their opinion or even about their experience with this particular brand. Due to this pre-purchase reflection which might also have included a lot of time, effort or even money, he or she will have high expectations towards the brand he or she is going to buy. After the purchase he or she will evaluate the brand's quality and his subjective perception will automatically affect the image he or she had before of the brand. If the perceived quality fulfills or even over exceeds his expectations, his previous established image of the brand will be affirmed or changed in a positive way, whereas the opposite is true if the brand fails to satisfy his expectations. Aaker and Biel (1993, p. 145) also share the assumption that "perceived quality can affect brand image directly or indirectly through the constructs of perceived value or brand attitude". Moreover, perceived quality is linked to how a brand is perceived and even drives this perception (Aaker 1996, p. 17).

However, the verification of this and all following hypotheses had to be accomplished by the analysis whether these factors have an effect on brand image, thus on brand equity. This indirect way had to be chosen since brand equity consists of brand awareness and brand image and

without the awareness of a certain brand the consumer cannot create a perception of this brand. Hence, if an impact on brand image can be explored, this automatically leads to an effect on brand equity.

H3.1.A$_A$: Perceived quality has an impact on brand image and therefore on brand equity

Germans are said to be proud of their high-quality products, especially products of the automobile and technology sector. Moreover, Germany is known as the home of reliable and solid products (De Mooij 2004, p. 121). Thus, it can be concluded that Germans tend to compare products as an iPod with German equivalents like a TrekStor music player, which has similar quality but costs less. Due to the cost/performance ratio which Germans tend to consider, it is assumed that their perceived quality of the premium price product iPod also depends on its relative performance.

Mexicans tend to view US apparel as high quality with a good fashion image, thus, they are willing to pay more for these attractive attributes (Lee et al. 2008b, p. 296). Consequently, their quality perception of the iPod being of US origin will not be influenced by its higher price compared to its competitors.

H3.1.B$_A$: Perceived quality of iPod differs in Germany vs. Mexico

Another element which is entailed in customer commitment is satisfaction, which influences whether consumers will buy from the same company again. According to Blackwell et al. (2006, p. 213), consumers holding negative evaluations of the product are unlikely to buy again and those holding positive evaluations are much more likely to repurchase the product and remain loyal.

The perceived quality, the associations, and the well-known name of a brand can provide reasons to buy and affect consumer's satisfaction which results in brand loyalty (Chen 2001, p. 440; Taylor et al. 2004, p. 218). A consumer having certain pre-purchase expectations towards a particular brand will be satisfied with it if it fulfills these expectations (Sheth et al. 1999, p. 549). This satisfaction will most likely result in a positive brand image. Thus, it can be assumed that:

H3.2.A$_A$: Satisfaction has an impact on brand image and therefore on brand equity

According to De Mooij (2009, p. 46), Germans show a lower level of satisfaction with their life than the people of other countries. Due to their perfectionism they have high expectation towards themselves and moreover towards products, whereas Mexicans take life easy and do not demand as much from products as Germans do (Gannon 2004, pp. 133). As a matter of fact, the higher the expectations the more difficult it is to satisfy those. Moreover, it was previously assumed that Germans' perceived quality of an iPod is lower than Mexicans' perception of it. According to the presumption that Germans have higher expectations towards an iPod and that they perceive its quality less superior than Mexicans, it is assumed that the satisfaction with an iPod will be different.

H3.2.B$_A$: Satisfaction of iPod differs in Germany vs. Mexico

In Aaker's (1991) framework brand loyalty is one of the dimensions defining brand equity. He states that a brand's value to a company is largely created by the customer's loyalty and that this asset helps to create brand equity. Moreover, brand loyalty has an influence on the value of a brand and consumer's perception of it (Taylor et al. 2004, pp. 218). Since brand image reflects current perceptions of a brand, brand loyalty has an impact on this dimension and consequently on brand equity (Aaker (1996), p. 180). Lee et al. (2008a, p. 166) define brand loyalty "as the tendency to be loyal to a focal brand, which is demonstrated by the intention to buy the brand as a primary choice". This definition suggests that purchase intention is highly related to brand loyalty and reinforces it. Hence, it can be assumed that both factors have an impact on brand equity:

H3.3.A$_A$: Purchase intention has an impact on brand image and therefore on brand equity

H3.4.A$_A$: Brand loyalty has an impact on brand image and therefore on brand equity

Research showed that even if a brand is more expensive or does not have the same quality as another brand, loyal customer still stick to it due to their more positive image of this brand (Palumbo and Herbig (2000), pp. 117). One explanation for the phenomenon of brand loyalty is that people are used to a certain brand and do not want to change their habits, even though there might be another brand which gives the consumer the same benefits for an even lower price. This is particularly true for electronic devices since the manual has usually to be studied before the product can be used and a change of the device implies the adaption to new functions and to the different handling of the product. Hence, brand loyalty for a specific brand of this product category is most often the result of the unwillingness to change a habit one is used to (Kerin et al. 2003, p. 109). Germans are generally known for their technology know-how and their price-consciousness. Hence, they do not have problems to adapt to new electronic devices and they might switch from an iPod to a competitor brand if finding a comparable product which costs less. On the contrary, Mexicans are said to become loyal to a brand once they used this specific brand and got familiar with it (Lee et al. 2008a, pp. 169). Consequently, they are not expected to switch brands after they have got used to it. In addition, according to Yoo (2009), the collectivist Mexicans show higher brand loyalty than the individualistic Germans.

Furthermore, a measurable indicator for brand loyalty is the repurchase behavior in case of high involvement products as an iPod (Jensen and Hansen 2006, pp. 442). Kim and Pysarchik (2000) found that favorable attitudes toward a product significantly predicted intention to purchase it. If someone is satisfied with his iPod and becomes loyal to this brand he or she will most likely repurchase it once he or she needs a new one which results in brand loyalty (Jensen and Hansen 2006, pp. 442). In addition, a survey in 2006 demonstrates that 31 percent of Mexicans own an iPod and 39 percent of the interviewees plan to repurchase an iPod (Wittman et al. 2006, pp. 10). Due to the higher likeliness of the intention to purchase an iPod and the superior brand loyalty levels for this high-involvement product among Mexicans, the following two hypotheses are assumed:

H3.3.B$_A$: Purchase intention of iPod differs in Germany vs. Mexico

H3.4.B$_A$: Brand loyalty of iPod differs in Germany vs. Mexico

The previous analyzed dimensions *perceived quality, satisfaction, purchase intention* and *brand loyalty* are the sub-dimensions belonging to *customer commitment.* Thus, it is assumed that due to their expected impact on brand image and the difference between Germany and Mexico, *customer commitment* - as the combination of all these four factors - will also influence brand equity and moreover, it will be different in these two countries.

H3.A$_A$: Customer commitment has an impact on brand image and therefore on brand equity
H3.B$_A$: Customer commitment of iPod differs in Germany vs. Mexico

Another influencing factor for brand equity is usage rate - defined as the quantity consumed within a certain time frame (Kerin et al. 2003, p. 193) - which has an influence on brand recall and brand image, thus on brand equity (Weitz and Wensley 2006, p.155). This implies that for someone using an MP3 player frequently it is easy to access and memorize its brand name, whereas someone who only uses its music player once in a while will have more difficulties to retrieve the brand from memory (Winchester and Romaniuk 2008, p. 360). According to Bird et al. (1970) the proportion of people who express a favorable attitude toward a brand is related to the recency and frequency rate of their brand usage. Additionally, current consumers perceive brands in a more favorable way than former users, and non-users have the least positive associations with that brand (Castleberry and Ehrenberg 1990). In conclusion, since usage rate has an impact on brand attitude and associations, it will also affect brand equity.

H4.A$_A$: Usage rate has an impact on brand image and therefore on brand equity

In Germany, the average usage rate of an MP3 player is about 1.5 hours (Werres 2006, p. 1), while 51 percent of Mexicans use their MP3 player between 1 to 4 hours and 14 percent even use it more than 4 hours (Wittman and Scott 2006, p. 13). According to the higher usage rate of iPods and the premise that usage rate influences brand recall, hence brand image perception, it is assumed that the Mexican students will have a more positive image of iPod than the Germans.

H4.B$_A$: Usage rate of iPod differs in Germany vs. Mexico

According to Childers and Rao, people who surround an individual have an influence on its opinion by telling their experiences with brands and products. In particular, family is said to have a higher influence than peer-based reference groups as one's brand loyalty and brand preference gets influences to a higher degree by family communication. This is especially true for developing countries, where families stick together (Childers and Rao 1992, pp. 198). Consequently, the consumer's reference groups – being the circle of friends and family members – can positively change his perception of a brand by emphasizing the advantages of a particular product (Wiedemann 2006, pp. 50). In summary, the society has a big influence on brand perception, hence on brand equity.

H5.A$_A$: Influence by reference groups has an impact on brand image and therefore on brand equity

According to Golle (2007, p. 15), group orientation is noticeable in Germany, especially among teenagers where difficulties regarding brands and peer pressure are experienced. In order to belong to a certain circle of "cool dudes" students need to possess a certain brand and if someone cannot afford well-known brands he or she has less chances to be accepted in the circle of friends. Whereas Germans seem to be forced to belong to a group by the ownership of a certain brand, Mexicans develop an affinity to brands which they can demonstrate to their friends in order to gain acceptance from them. As a consequence, Mexicans buy notable brands, particularly foreign brands from the USA to show them to their surroundings (Vaezi 2005, p. 44). In a survey among teenagers it was found that iPod is a brand which is a symbol of status and connects friends. This means that someone who does not own an iPod cannot keep up when his friends talk about something he or she does not have. In contrary, if nobody in a circle of friends owns an iPod or has ever heard of it, then nobody can desire something he or she does not even know (Wiedemann 2006, pp. 55). Moreover, if the member of a Mexican's family uses one particular brand, the individual will be likely to use the same brand (Childers and Rao 1992, p. 200). In conclusion, Germans as well as Mexicans are influenced by their friends and aspirational groups. However, due to the fact that Mexicans also experience a strong influence behalf their family, it is assumed that the general impact of reference groups will be higher among Mexicans.

H5.B$_A$: Influence by reference groups differs in Germany vs. Mexico

3.5   General Remarks about the used Questionnaire

After having defined the global brand Apple as the subject of investigation, it is essential to determine in which way the brand equity analysis of this brand should be accomplished in the questionnaire.

Due to the high sample size which is needed to elaborate the brand equity analysis in high depth, the choice of the study instrument had to be well-considered. Knowing that an online survey is difficult to administer, especially in a country like Mexico where people need incentives to do a certain task (Kumar 2000, p. 380), a paper-based questionnaire was chosen as instrument for the study. Since the authors could not supervise the conduction of this questionnaire in Mexico in person, it had to be as transparent and as clear as possible. Consequently, important words were made in bold and general instructions how to answer the questions were written in italic. Moreover, the same types of questions had also an equal layout, so that the students could discover a red thread though the questionnaire which they could follow without any difficulties or detours.

The questions were kept simple and direct so that the students could answer them fast and without having to think too much. That means they did not have to look for certain information in order to generate an adequate answer to the question.

In general, mainly closed questions were chosen due to their obvious advantages compared to open questions. Closed questions are easier and faster to answer for respondents and they require

less effort for the researcher as answers are directly comparable from respondent to respondent, respectively in this study, from country to country. Moreover, there is less potential error due to the differences in the way questions are asked and responses recorded (Aaker et al. 2007, p. 321). The questionnaire's main part was based on statements and attributes with which the students could agree or disagree by using a five-point Likert scale. On the one hand this specific measurement ensures consistency, and on the other hand this kind of scale is well established in research practice. However, when using an odd scale, one has to keep in mind that Mexicans tend to either strongly disagree or strongly agree. "Hispanics were found to exhibit a stronger tendency for extreme checking (about half the time, on the average) than non-Hispanic, but only when the 5-point scales were used" (Hui and Triandis 1989). Moreover, an odd scale carries the risk, that the field in the middle is used as an escape, since the interviewees do not want to or cannot decide for a certain scale point. The choice of this particular field also could be an attempt to go on with the next question without having to state one's own opinion to this question (Porst 2008, p. 81). Furthermore, the offering of a middle alternative was chosen as it is assumed that interviewees "who opt for it really do favor the middle position and if forced to choose a polar alternative will contribute some form of random or systematic error" (Schuman and Presser 2006, p. 162). Another important expedient was that only the end points of the Likert scale were specified with "strongly agree" respectively "strongly disagree" and thus, the scale could be taken as interval instead of an ordinal scale given the presumption, that the scale points have the same distances. Besides, this grading made it possible to accomplish more complex analyses, as for example factor analysis, which is not allowed for an ordinal scale (Porst 2008, p. 80).

Though it was mentioned above that mainly closed questions were used, the questionnaire also included three open questions which were used for the following reasons: First, brand recall can only be asked using an open question to gather information about the relevant set in mind of the interviewees. In this case, they had to state which MP3 player brands they know. Second, at the end of each of the three attribute categories (*functional brand associations, emotional brand associations* and *brand personality*) the interviewee had to repeat one respectively three of the previous mentioned attributes. The reason for this was to achieve a more detailed evaluation by the interviewee about the preference and perceived relevance of attributes for the brand iPod respectively Apple. Nevertheless, the response alternatives were limited to the attributes which were stated above this question, thus it could be seen as structured.

Third, there was an open question asking both iPod-purchasers and non-iPod-purchasers how many of their (best) friends have an iPod. However, the interrogated estimation of iPod-owners in student's circle of friends did not serve for a computation, but rather for a subjective appraisal. The indicated percent figure rather helped to analyze whether the respondent has the feeling that nearly all of his friends have an iPod. This could serve as indicator for the degree of the pressure, both on the current non-iPod-user to buy this MP3 player as well, and on the previous non-iPod-purchaser. Hence, it was not needed that the students could give exact information about the number of iPod-owners in their circle of friends. On the contrary, by making students think about the estimate of iPods in their social environment, they were sensibilized for the successive questions and consequently they could answer them more easily.

The sensitive questions concerning the influence of reference groups on the respondents and the question about "being an outsider" were diminished by means of generalization. Instead of asking the students, if they want to signalize their affiliation with a group by the ownership of an iPod, respectively, if they feel as outsiders if not owning an iPod, the "other people approach" by giving the impersonal statement "People show their affiliation with a group by the ownership of an iPod" respectively "People who do not own an iPod are seen as outsiders by others, was used (Aaker et al. 2007, p. 328).

3.6   Operationalisation of Brand Attributes and of the Influencing Factors

Based on the established model the frame of the questionnaire was built. Table 1 shows in detail how each brand dimension and each influencing factor with its related sub-levels was measured in the questionnaire (see questionnaires in Appendix 1).

As mentioned above the main part of the questionnaire contained attributes which had to be rated by the students to measure the various brand dimensions. Even though measurement scales for the different brand dimensions were developed by other authors (e.g. Aaker 1997; Keller 2008), these scales are not practical to use in some applied studies because of their length. Hence, the researchers established their own scales or used simple scales as Likert type. The attributes of iPod and Apple being tested in the survey had been collected by the means of the following sources:

1. The brand identity of iPod, that means, how the company Apple wants its brand to be seen by its stakeholders, especially by its customers
2. Recent literature and
3. Other studies about Apple (see especially Reppel et al. (2006))

Table 1: Measurement of Brand Dimensions and of Influencing Factors

Brand dimension	Components	Type of questions
Brand awareness	Brand recall	Which MP3 player brands do you know? *(question 2.1)*
Brand image	Brand attitude	Rating of attributes concerning the attitude towards the brand iPod of the interviewee *(section 5)*
	Brand associations	Rating of functional and emotional attributes of iPod *(sections 6 & 7)*
	Brand personality	Rating of attributes for iPod which are human *(section 8)*

Influencing factors	In detail	Type of questions
Demographics	Gender Nationality	[ ] female [ ] male [ ] Mexican [ ] German [ ] Other[6]
Usage rate	Heavy vs. light user	How many hours per day do you use your MP3 player? *(question 2.3)*
Influence by reference groups	Influence behalf friends and family members *(separate sections for iPod-purchasers and non-iPod-purchasers)*	(Potential) purchase of an iPod because of the recommendation by a friend/family member *(3.2 & 4.2);* (Potential) purchase of an iPod because a friend/family member already owns one *(3.3 & 4.3)* People show their affiliation with a group by the ownership of an iPod. *(3.4. & 4.4);* People, who do not own an iPod, are seen as outsiders by others. *(3.5 & 4.5)*
Customer commitment	Perceived quality	Rating of the attribute saying iPods are "high-quality products" *(question 6.1)*
	Satisfaction	Rating of the attribute saying iPods are "satisfactory" *(question 6.6)*
	Brand loyalty and Purchase frequency	*For iPod-purchasers:* How many iPods have you already bought? *(question 3.6)*
	Brand preference	I would definitely buy an iPod again, if my current one got lost/stolen or if it was damaged. *(question 3.7)*
	Repurchase intent	I always need to have the latest iPod generation. *(question 3.8)*
	Brand preference and Purchase intention	*For non-iPod-purchasers:* I would definitely buy an iPod, if I needed a new MP3 player. *(question 4.6)*

Appendix 3 shows the most relevant attributes which are assigned to Apple respectively iPod by one of the three above mentioned sources. The assignment of these attributes to the four brand image dimensions was accomplished according to their meaning for the consumer. Hence, statements like *fill their owners with pride* were subordinated to *brand attitude*, as they stress consumer's opinion and overall evaluation of the brand. In addition, the equal procedure was done for the allocation of the other attributes to the three remaining dimensions *functional* and *emotional brand associations* and *brand personality*. Table 2 displays how the analysis of the hypotheses has been accomplished and which questions have been used for it. The auxiliary hypotheses denoted with an *A* stated that it is expected that the influencing factors have an impact on brand equity.

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[6] If students of another nationality than Germany or Mexico answered the questionnaire, they could be excluded afterwards by the means of the answer alternative "other".

Table 2: Overview of the Main and Auxiliary Hypotheses and the Analyzed Questions

Hypothesis	Analyzed questions
$H1_0$: Brand recall of iPod is the same in Germany and Mexico $H1_A$: Brand recall of iPod differs in Germany vs. Mexico	Brand recall *(question 2.1)*
$H2_0$: Brand image of iPod is the same in Germany and Mexico $H2_A$: Brand image of iPod differs in Germany vs. Mexico	Brand attitude, functional and emotional brand associations, and brand personality *(question 5.1 - 8.15)*
$H2.1_0$: Brand attitude of iPod is the same in Germany and Mexico $H2.1_A$: Brand attitude of iPod differs in Germany vs. Mexico	Brand attitude *(question 5.1 - 5.8)*
$H2.2_0$: Functional brand associations of iPod are the same in Germany and Mexico $H2.2_A$: Functional brand associations of iPod differ in Germany vs. Mexico	Functional brand associations *(question 6.1 - 6.9)*
$H2.3_0$: Emotional brand associations of iPod are the same in Germany and Mexico $H2.3_A$: Emotional brand associations of iPod differ in Germany vs. Mexico	Emotional brand associations *(question 7.1 - 7.7)*
$H2.4_0$: Brand personality of iPod is the same in Germany and Mexico $H2.4_A$: Brand personality of iPod differs in Germany vs. Mexico	Brand personality *(question 8.1 - 8.15)*
$H3.A_0$: Customer commitment has no impact on brand image perception $H3.A_A$: Customer commitment has an impact on brand image perception $H3.B_0$: Customer commitment of iPod is the same in Germany and Mexico $H3.B_A$: Customer commitment of iPod differs in Germany vs. Mexico	Customer commitment *(questions 3.7, 4.6, 6.1, 6.6)*
$H3.1.A_0$: Perceived quality has no impact on brand image perception $H3.1.A_A$: Perceived image has an impact on brand image perception $H3.1.B_0$: Perceived quality of iPod is the same in Germany and Mexico $H3.1.B_A$: Perceived quality of iPod differs in Germany vs. Mexico	Perceived quality *(question 6.1)*
$H3.2.A_0$: Satisfaction has no impact on brand image perception $H3.2.A_A$: Satisfaction has an impact on brand image perception $H3.2.B_0$: Satisfaction of iPod is the same in Germany and Mexico $H3.2.B_A$: Satisfaction of iPod differs in Germany vs. Mexico	Satisfaction *(question 6.6)*
$H3.3.A_0$: Purchase intention has no impact on brand image perception $H3.3.A_A$: Purchase intention has an impact on brand image perception $H3.3.B_0$: Purchase intention of iPod is the same in Germany and Mexico $H3.3.B_A$: Purchase intention of iPod differs in Germany vs. Mexico	Purchase intention *(question 4.6)*
$H3.4.A_0$: Brand loyalty has no impact on brand image perception $H3.4.A_A$: Brand loyalty has an impact on brand image perception $H3.4.B_0$: Brand loyalty of iPod is the same in Germany and Mexico $H3.4.B_A$: Brand loyalty of iPod differs in Germany vs. Mexico	Brand loyalty *(question 3.7)*
$H4.A_0$: Usage rate has no impact on brand image perception $H4.A_A$: Usage rate has an impact on brand image perception $H4.B_0$: Usage rate of iPod is the same in Germany and Mexico $H4.B_A$: Usage rate of iPod differs in Germany vs. Mexico	Usage rate *(question 2.3)*
$H5.A_0$: Influence by reference groups has no impact on brand image perception $H5.A_A$: Influence by reference groups has an impact on brand image perception $H5.B_0$: Influence by reference groups is the same in Germany and Mexico $H5.B_A$: Influence by reference groups differs in Germany vs. Mexico	Influence by reference groups *(questions 3.2 - 3.5 and 4.2 - 4.5)*

If possible, it was tried to condense nouns or even sentences in one attribute to accomplish both, the facilitation and acceleration of the answering process for the interviewees. Hence, the students had to read and rate only one word and the predetermined requirement to use a new way of comparing the brand equity of a brand in different countries by means of attributes could be fulfilled. Nevertheless, the effect of sequence, concerning the rating of attributes, could not be avoided by the development of two questionnaire versions for each country as the survey was not conducted online and it had to be scanned. Consequently, the question arose, whether the degree of agreement with the particular attribute is influenced by the attribute or even attributes that precede

it. There is only little literature and research about the sequence effects of attributes in a questionnaire, but one cannot ignore the possible impact. More research was done concerning the order of questions with the possible consequence of "fatigue effects" and the response-order problem, which means the order of answer alternatives offered to an interviewee, with potential results of primacy and recency effects (Schumann and Presser 1996, p. 12).

In conclusion, instead of using only positive attributes describing an iPod, also negative attributes were chosen. Through the mixture of these two alternatives in the association sections, the researcher hoped to eliminate a possible order effect. Moreover, to include as well negative attributes might have also caused another problem. The non-iPod-users could have felt offended if only positive attributes of an iPod would have been asked about. However, at this point, it depends on the reason why a certain interviewee is a non-iPod-user. One possibility could be that he or she does not care about a special brand of MP3 player. Furthermore, this person could want to differentiate himself or herself from the iPod "addicts" or he or she might not be able to afford to buy an iPod. In summary, to include both positive and negative attributes and statements about an iPod provided an ideal method which solved the possible problems anyway.

3.7   Exclusion of Certain Influencing Variables

It was essential to exclude several variables in order to guarantee in the best possible way that only the chosen factors, in this case *customer commitment*, *usage rate* and *influence behalf friends and family*, have an impact on the brand dimensions. For this purpose the following influencing factors were excluded in the questionnaire.

Table 3: Excluded Variables and their Way of Exclusion

Variable	Way of exclusion
Educational background	Only students were chosen as interviewees *Result: a comparable educational background*
Age	In Germany students from the first, second and third semester participated in the survey, whereas in Mexico students from the final semesters were asked *Result: A comparable age range in both countries*
Nationality	Only students who are Mexican or German were asked to answer the questionnaire *Result: Exclusion of other nationalities*
Study program	Only students studying business or management had to fill in the questionnaire *Result: Comparable knowledge and interests*
Positioning of global brand	Apple is a global brand as it fulfills all main conditions requested from the researchers *Result: Apple has the same positioning in both countries*
Country-of-origin (COO)	Apple is known as an US-American brand *Result: No COO-effect on brand equity*

3.8   Pretest of the German Questionnaire

First of all, a German questionnaire draft was developed and checked by experts, and subsequently tried out with the help of pretests. For the German pretest, 17 students from Pforzheim University who attend higher semesters than in the real survey were asked, so that the students going to be surveyed do not know the questionnaire beforehand. In the pretest, the students as representatives

of the sample population got detailed information about the purpose of the study and the research topic so that they were enabled to make adequate proposals based on the given background. Students were asked about understanding problems, meaning of particular words, the way they understand the given instructions and their overall opinion of the questionnaire, e.g. flow of the questions, length, interest and attention. The first questionnaire draft contained a large number attributes and some of them were quite similar. The objective was to eliminate part of them with the aid of Cronbach's alpha. For this purpose, the students had to state their degree of agreement with all of the attributes and then Cronbach's alpha statistics was used to find out which attributes have a high causal correlation, thus the same meaning. Through this procedure, the researchers were able to ensure that only one of the equal attributes remained in the final questionnaire. Nevertheless, one has to be careful with false correlations with the result of wrong eliminations and consequently information loss. In conclusion, after a thorough process of improvements with the use of experts' knowledge, pretest and Cronbach's alpha statistics, the final questionnaire could be determined. The following attributes were excluded after using Cronbach's alpha: all-in-one, unhandy, incompatible, iconic, revolutionary, extraordinary, friendly, happy, imaginative and reliable.

3.9   The Translation and Pretest of the Mexican Questionnaire

Instead of developing an English questionnaire which could be conducted in Mexico and Germany, the questionnaire was generated in the native languages of these two countries. The main reason for this more complex translation was, that by using English words, especially attributes, one might risk that students from Mexico interpret them differently than the German students, thus, the analysis could include biases. However, the process of translating the questionnaire into Spanish also entailed possibilities of failures.

For the translation of the German questionnaire into Spanish, the back translation method was used. That means, the German questionnaire was translated into Spanish by a native speaker who is fluent in Spanish and German and then this Spanish questionnaire was back translated into German by another native speaker in both languages. Nonetheless, this second person was not familiar with the original version during the translation process in order to guarantee reliability. Afterwards, the two German versions were checked and compared, and the involved translators discussed and eliminated the meaning changes between the original and the back translation version (Cleff 1997, p. 155; Kumar 2000, p. 431). Nevertheless, despite the dedicated accuracy, the back translation cannot guarantee complete reliability that researcher and interviewees will not misunderstand each other regarding the meaning of specific terms.

However, in cross-cultural studies translation problems are profound; this means special care has to be taken in order to keep the same meaning of words (Aaker et al. 2007, p. 325). Table 4 shows possible translations of various German terms for which it was particularly difficult to find appropriate words in Spanish. In some cases, the German word could not be translated by the choice of a single Spanish term without changing the original meaning. Hence, these specific expressions had to be explained in a whole sentence.

Table 4: Possible Translations of relevant German Terms into Spanish

German term	Meaning in English	Possible Translation into Spanish	Choice of Spanish term	Meaning in English
Unterwegs	On the move	De camino, de viaje, caminando	Caminando	On the way
Außenseiter	Outsider, maverick, underdog	Marginado, excéntrico, pasota	Marginado	Outsider
Angeber	Poser, show-off	Figurón, fanfaron, presumidos	Presumidos	Show-off
Mitläufer	Follower	No equivalent Spanish expression	Para personas que los compran porque otras personas tienen uno	For people who buy an iPod, because other people have one
Müssen einfach geliebt werden	Just have to be loved	No equivalent Spanish expression	Son muy apreciados por sus propietarios	Are highly appreciated by their owners
„Must-have"	Must-have	No equivalent Spanish expression	Hay que tener uno	One has to have one
Lebenslustig	Pleasure-loving, in love with life	(Vividor/a, vido/a)	Disfruta de la vida	Enjoying life
Stylish	Stylish	This term does not exist in Spanish	De moda	Fashionable, trendy, stylish

Source: Langenscheidt Redaktion (2008a &2008b), PONS Praxiswörterbuch (2006), Universelles Wörterbuch Spanisch, and Dictionary PONS (URL)

For the Mexican pretest, 13 Mexicans, studying at Pforzheim University were asked to make suggestions of improvements. This was to guarantee readability and logical arrangement of the questions perceived by the research population. Moreover, they also had to fill in the questionnaire and especially answer the open question 2.3 "*how many hours per day do you use the MP3 player in average?"* in order to find the appropriate answer alternatives range. This range served as a basis for the determination of the closed question in the questionnaire with *"less than one"* hour to *"more than six".* In addition, the questionnaire was modified with the incorporated suggestions (e.g. spelling and re-phrasing) made by the Mexicans.

3.10   The Conduction of the Survey in Germany and Mexico

The survey took place at Pforzheim University and Tecnólogico de Monterrey during lecture time in May and June 2009. The questionnaires were distributed at the beginning of the lectures to ensure that the students are concentrated and have a high motivation to answer them in the best possible way. As the survey was accomplished with a self-administered questionnaire, it was highly important that the students had the necessary information of how to answer it correctly. Since the authors were present to ensure correct conduction of the survey in Germany, it also had to be

ensured that the survey was correctly conducted in Mexico. Therefore, a manual[7] with essential details was developed in cooperation with Cesar Sepulveda, at that time guest professor at Pforzheim University, to guarantee that Mexican students are informed in an equal way as the German students. Hence, the best possible initial position - to ensure both an optimal data collection and a fast implementation - was achieved. In total, n_G=426 Germans and n_M=296 Mexicans participated.

4   Results

4.1   Data Preparation

Problems which emerged by screening the questionnaires were fatigue effects at the end of the questionnaire due to its length, what resulted in empty left boxes for the attributes on the last page before the demographics. In addition, especially German students (24.2%) often did not cross the MP3 player brand they use.

In the case of early break-offs with the loss of demographic data, particularly nationality, the figure representing Germany for the variable nationality was subsequently added. This post-correction was done due to the assumption that the students not answering the last part of the German questionnaire were of German nationality. Since the students being non-MP3-users did not complete the questionnaire, they were excluded from the data set. However, it was detected that 93 students did choose answer "no" for the question 2.2 *"Do you use an MP3 player?,* but then did complete the questionnaire instead of handing it back to the researcher as instructed after this particular question. Moreover, the following two questions 2.3 *"How many hours per day do you use your MP3 player in average?"* and 2.4 *"In which situations do you use the MP3 player?"* were also not answered by these students. Consequently, it was assumed, that these respondents actually *own* an MP3 player, however, do not *use* it. In conclusion, the answers of *question 2.2* were re-coded with "yes, since the opinion of these students was of high relevance for the researcher, their answers should not be excluded from the analysis. In both the German and Mexican data set, students from another nationality than one of these were eliminated, resulting in 408 German and 236 Mexican data sets which then could be used in the data analysis. Moreover, the measuring level for the Likert scale was changed to interval due to the assumption that as only the end points are specified, it can be presumed that the scale points have the same distances. Negative attributes were re-coded into different variables, so that all the attributes and statements were scaled in the same direction.

4.2   Verification of the Hypotheses

The study was based on a convenience sample of business students from Pforzheim University and from Tecnólogico de Monterrey. Table 5 shows an overview of the main descriptive findings.

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[7]   See Appendix 2 for the assistant's manual.

Table 5: Sample Characteristics

	Germany	**n_G**	**Mexico**	**n_M**
Female / Male	65% / 35%	316	59% / 41%	228
Age in years[8]	Ø = 21.5	317	Ø = 20.9	228
Students who own an MP3 player / students who do not own an MP3 player	99% / 1%	426	81% / 19%	296
iPod-owners / non-iPod-owners	47% / 53%	311	91% / 9%	234
iPod-purchaser / iPod as a gift	76% / 24%	146	81% / 19%	213

Several insights can be gained by the information in this Table 5. First, more female students (in total about 63%) completed the questionnaire in both countries. Second, the age range respectively the mean of the student's age is comparable in the two countries due to the procedure to ask different semesters in each country. Third, a high number of Mexican students stated that they do not own an MP3 player. However, due to the high market share of MP3 players, especially for iPod, it can be assumed that these particular students did not want to complete the questionnaire, thus, crossing the answer "*no, I do not use an MP3 player*". Fourth, in Germany are less students who own an iPod compared to Mexican students. Fifth, an almost equal number of iPod-owners in Germany and Mexico bought an iPod respectively got an iPod as a gift.

4.2.1   Brand Recall Differences between Germany and Mexico

The first brand equity component to be analyzed is *brand awareness* which was further divided into *brand recall* and *recognition*. As the query of both dimensions would have gone beyond the scope of this study, only brand recall was requested from the students. Due to the absence of the forms filled in by the 56 Mexican non-MP3 player-users, brand recall was calculated by considering only the answers of MP3 player-users in both countries. In Germany, 362 out of 408 MP3 player owners answered the brand recall question, that means 46 respondents did over-read the question, simply did not want to answer it or really could not recall an MP3 player brand even though they own one. On average about three brands were recalled by the German students, whereby iPod was recalled by about 62%, Apple by approximately 27% and in total about 88% recalled at least one of these two brands.

In Mexico, 231 out of 236 owners of an MP3 player answered the brand recall question, with an average of 2.6 brands. The brand iPod was recalled by about 78% and Apple by approximately 19%. It never happened that a student recalled both brands, that means in total 97% recalled either iPod or Apple.

Table 6 shows that students in both countries are very familiar with iPod as they recall it to a high extent. Second, the brand recall of iPod is higher among Mexican students than German students and for Apple it is vice versa. Nevertheless, when screening the data sets it was detected that 15 German and four Mexican students actually own an iPod, but nevertheless did not mention either Apple or iPod in the provided space for the recall question. Reasons for this incident could be, that for the owners of an iPod it is too obvious that they know that brand, thus, they do not think it is necessary to mention it explicitly. Another factor could be that students do not see an iPod as an

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[8]   Younger than 18 and older than 24 years was calculated with 18 years resp. 24 years.

MP3 player, but rather as an individual category of music players with the result that they do not have an iPod in mind when being asked about MP3 player brands.

Table 6: Brand Recall of MP3 Player-Users in Germany and Mexico

	Germany	Mexico
iPod	61.9%	78.4%
Sony	68.5%	63.6%
Samsung	32.6%	22.9%
Philips	37.0%	14.7%
Apple	27.3%	19.0%

** The Chi-square-test is significant on the 0.01 level.
Only the most often recalled brands are shown in the figure above.

Moreover, the Chi-square test of independence was used to prove whether the differences of frequencies are significant between the two countries. In summary, as the brand recall of iPod differs significantly between Germany and Mexico, the null hypothesis *$H1_0$: Brand recall of iPod is the same in Germany and Mexico* can be rejected, hence, as brand recall is one component of brand awareness, it can be concluded that this dimension is different between Germany and Mexico. Consequently, as brand awareness is in turn one brand equity element, the first part of it seems to differ. The following analyses will explore whether the second element of brand equity, namely brand image also differs between the two countries.

4.2.2   Brand Image Differences between Germany and Mexico

The parametric t-test[9] of independent samples and the non-parametric Mann-Whitney U-test[10] were chosen for the comparison of the means / mean ranks for all attributes belonging to brand image between the two countries. This dimension was defined as a generic term for its sub-dimensions *brand attitude*, *functional* and *emotional brand associations*, and *brand personality*. Every single attribute - independent of the sub-dimension it belongs to - was considered in the two tests. The purpose of these tests was to verify the null hypothesis *$H2_0$: Brand image of iPod is the same in Germany and Mexico* through its sub-hypotheses (*$H2.1_0$ – $H2.4_0$*). Hence, if the null hypothesis of one of the sub-hypotheses could be rejected, the alternative hypothesis *$H2_A$: Brand image of iPod differs in Germany versus Mexico* could be affirmed.

First, comparing the means for the attributes belonging to brand attitude (*section 5*), the findings showed that the means of only one statement, namely *are nothing for followers* (α=0.91) did not differ significantly between Mexico and Germany. Hence, as all the other statements differed significantly between the two countries, the null hypothesis *$H2.1_0$: Brand attitude of iPod is the same in Germany and Mexico* could be rejected.

Second, the cross-national comparison of the functional brand associations in *section 6* revealed that out of six attributes only *flexible* (α=0.08) and *elegant* (α=0.07) were not significantly different in the two countries. For the emotional brand associations in *section 7*, it was even detected that complete mean heterogeneity prevails. Considering the majority of differences between the two compared means, the null hypotheses *$H2.2_0$: Functional brand associations of iPod are the same in*

Germany and Mexico and *H2.3$_0$: Emotional brand associations of iPod are the same in Germany and Mexico* could be rejected.

Third, *section 8* included human attributes which had to be rated in order to examine brand personality. This part was the most extensive section as it included 14 out of 34 attributes, which were analyzed in the four sub-dimensions of brand image. The t-test for independent samples identified that *not cocky* (α=0.66), *American* (α=0.06) and *not sophisticated* (α=0.21) did not differ significantly between Mexican and German students. Whereas the Mann-Whitney U-test revealed that only *not cocky* (α=0.64) and *not sophisticated* (α=0.28) were not significantly different. Due to the high number of significantly different means for the remaining eleven respectively twelve attributes between the two countries, the null hypothesis *H2.4$_0$: Brand personality of iPod is the same in Germany and Mexico* could be rejected.

In conclusion, as all of the four null sub-hypotheses belonging to brand image could be rejected, the alternative hypothesis *H2$_A$: Brand image of iPod differs in Germany vs. Mexico* could be affirmed. The profile line of all Likert-type questions in Appendix 4 also shows that the six attributes *nothing for followers*, *elegant, not cocky, not sophisticated, flexible* and *American* have (almost) the same mean in the two countries.

4.2.3   Factor Analysis of the Brand Image Dimensions

Due to the high amount of attributes[11] in the *sections 5 to 8* of the questionnaire, a factor analysis had to be accomplished considering the rated attributes for the brand image sub-dimensions[12]

- Brand attitude
- Functional brand associations (excluding *high-quality products* and *satisfactory*)[13]
- Emotional brand associations
- Brand personality

Table 7 gives an overview of the nine resulted factors used as reduced brand image dimensions for the following analysis. Detailed results can be found in Appendix 6. There it is obvious that the brand image sub-dimensions are „meritorious" (Kaiser and Rice 1974, pp. 111) for a factor analysis because the Kaiser-Meyer-Olkin Measure of Sampling Adequacy is equal to 0.822.

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[11] The profile line of the two countries for all Likert-type questions and the descriptive analysis of them can be found in Appendix 4.

[12] The negative attributes were re-coded beforehand so that the directions are the same.

[13] These two attributes are excluded from the factor analysis of brand image as they will be used as indicators for the influencing factors *satisfaction* respectively *perceived quality*.

Table 7: Factor Analysis of the Brand Image Dimensions

Factors	Attributes
Factor 1: "Basics"	Elegant; A "must-have"; Inspirational; Different; Innovative; Aesthetic; Cool; Creative
Factor 2: "Performance"	Just need to be loved; Multifunctional; Easy-to-use; Powerful; Time-saving; Are better than other MP3 players
Factor 3: "Esteem"	Are a symbol of liberty; Are a mean of self-expression; Fill their owners with pride; Are no products for show-offs; Are nothing for followers
Factor 4: "Apple's Core"	Intelligent; Stylish; Trustworthy; Unique; Young
Factor 5: "Attitude"	Full of the joys of life; Passionate; Not sophisticated
Factor 6: "Normality"	American; Unexaggerated
Factor 7: "Exclusiveness"	Not mainstream; Not cocky
Factor 8: "Convenience"	Not too expensive; Flexible
Factor 9: "Responsibility"	Social responsible

The answers for the factor *influence by reference groups* also had to be compressed in order to allow for further analysis with this variable. The statements about a (potential) purchase of an iPod because of the recommendation by a friend/family member *(3.2 & 4.2)* and a (potential) purchase of an iPod because a friend/family member already owns one *(3.3 & 4.3)* were answered by iPod-purchasers in *section 3* and by non-iPod-purchasers in *section 4*. Hence, the completion of only one section resulted in missing values for the other section.[14] However, as these statements have the same intention and content, variables were calculated combining the equivalent question types. After this data preparation, the factor analysis of influences by reference groups could be accomplished with the following result: [15]

Table 8: Factor Analysis of Influence by Reference Groups

Factors	Question type
Factor 1: "Purchase Influence"	Recommendation (*question 3.2 and 4.2*) Ownership (*question 3.3 and 4.3*)
Factor 2: "Group Aspiration"	Affiliation (*question 3.4 and 4.4*) Outsiders (*question 3.5 and 4.5*)

4.2.4   Validation of the Influencing Factors on Brand Image

For the verification of the auxiliary hypotheses, a bivariate correlation analysis was used to prove whether brand image is affected by the chosen influencing factors. These factors were previously defined as *influence by reference groups*[16], *usage rate* and *customer commitment*. The latter one

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[14] E.g. an iPod-purchaser only rated the statement that he or she has bought an iPod because a friend/family member recommended it (*question 3.2*) and not that he or she would buy an iPod if a friend/family member recommended it (*question 4.2*)

[15] See detailed results in Appendix 8.

[16] For this variable the two resulting factors in *4.5.3*, namely *purchase influence* and *group aspiration* were used.

was sub-divided into brand loyalty (*question 3.7*), purchase intention (*question 4.6*)[17], perceived quality (*question 6.1*) and satisfaction (*question 6.6*). The analysis had to be conducted for each of the nine brand image factors (see Table 9) with every single influencing factor. As the Kolmogorov-Smirnov test revealed that the variables to be tested differ significantly from a normal distribution, Kendall's Tau rank correlation coefficient was used to proof the null hypotheses. Table 9 shows whether there is a correlation between the variables and if so, the direction of the correlation.

From Table 9 it can be seen that all of the influencing factors have an impact on brand image. Moreover, *satisfaction*, *usage rate* and *influence by reference groups* show the highest impact on *brand image* as each of them correlates with five of the nine factors defined for this dimension. Consequently, the auxiliary null hypotheses ($H3.A_0 - H5.A_0$) could be rejected. In conclusion, every influencing factor has a significant impact on brand image.

Table 9: Correlation Analysis (Kendall's Tau) of Brand Image and Influencing Factors

		Perceived Quality	Satisfaction	Purchase Intention	Brand Loyalty	Usage rate	Purchase influence	Group aspiration
Basics	Tau	-,033	,101**	,082	-,017	-,131**	,050	,015
	Sig.(2-tailed)	,314	,002	,068	,721	,000	,099	,618
	N	539	539	266	274	545	494	494
Per-formance	Tau	,315**	,556**	,427**	,125**	-,180**	,262**	-,030
	Sig.(2-tailed)	,000	,000	,000	,007	,000	,000	,328
	N	539	539	266	274	545	494	494
Esteem	Tau	,082*	-,100**	-,080	-,012	,045	-,105**	,155**
	Sig.(2-tailed)	,012	,002	,079	,796	,167	,001	,000
	N	539	539	266	274	545	494	494
Apple_core	Tau	-,025	,091**	,086	-,019	-,116**	,082**	-,030
	Sig.(2-tailed)	,451	,005	,057	,690	,000	,007	,325
	N	539	539	266	274	545	494	494
Attitude	Tau	-,007	,014	,025	,067	-,044	,061*	-,037
	Sig.(2-tailed)	,821	,667	,573	,151	,176	,046	,221
	N	539	539	266	274	545	494	494
Normality	Tau	-,008	,000	-,044	-,075	-,032	,005	,000
	Sig.(2-tailed)	,815	,982	,327	,109	,326	,867	,995
	N	539	539	266	274	545	494	494
Exclusive-ness	Tau	-,224**	-,070*	,120**	,072	-,102**	,087**	-,020
	Sig.(2-tailed)	,000	,034	,008	,124	,002	,004	,514
	N	539	539	266	274	545	494	494
Con-venience	Tau	-,080*	-,037	-,061	,020	-,033	-,044	-,010
	Sig.(2-tailed)	,014	,257	,177	,668	,309	,153	,741
	N	539	539	266	274	545	494	494
Respon-sibility	Tau	-,045	,062	,000	,143**	-,088**	,018	,037
	Sig.(2-tailed)	,170	,060	,994	,002	,007	,560	,227
	N	539	539	266	274	545	494	494

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[17] The questions to measure *brand loyalty* and *purchase intention* intended the same, with the only difference that the question concerning *brand loyalty* was asked in the iPod-purchaser section and *purchase intention* in the non-iPod-purchaser section.

Before the test of independent samples and the Mann-Whitney U-test were conducted to analyze whether the influencing factors on brand image in Germany and Mexico differ significantly, a closer look was taken at the means of these factors to get a first insight. Table 10 shows an overview of the means of these factors in both countries. As it can be detected, the means in Germany are always higher[18], which means that the German students have a lower degree of agreement with the attributes or statements than the Mexicans. In addition, usage rate is lower in Germany with an average of 1.6 hours per day in comparison of 2.6 hours per day in Mexico.

The t-test for independent samples and the Mann-Whitney U-test both showed that only the factor *group aspiration* did not differ significantly between Germany and Mexico. Thus, the other six influencing factors (purchase influence, usage rate, perceived quality, satisfaction, purchase intention, and brand loyalty) were significantly different!

Table 10: Overview of the Means of the Influencing Factors

	Germany	Mexico
Perceived quality	2.3	1.9
Satisfaction	2.2	1.7
Purchase intention	3.6	2.1
Brand loyalty	1.9	1.6
Influence by reference groups[19]	4	3.5
Usage rate	1.6 hours	2.6 hours

In conclusion, the null hypothesis $H3.B_0$: *Customer commitment is the same in Germany and Mexico* could be rejected due to the rejection of all its sub-hypotheses ($H3.1B_0$ - $H3.4.B_0$). Moreover, the null hypothesis $H4.B_0$: *Usage rate is the same in Germany and Mexico* and even $H5.B_0$: *Influence by reference groups is the same in Germany and Mexico* could be rejected, as the other factor of this variable - namely *purchase influence* - differed significantly between the two countries. Hence, all alternative hypotheses for the influencing factors denoted with a *B* could be accepted, meaning that all of the influencing factors differ significantly between Germany and Mexico. Therefore, multivariate analysis needs to analyze if these influencing factors are causing the differently perceived brand equity or if the single dimensions of brand equity stay significant (within the brand equity model). The latter would mean that iPod does not consist of a uniform brand image (and hence not of a uniform brand equity).

4.3 Validation of the Brand Equity Model by Multivariate Analysis

Due to the high correlation of these variables, a factor analysis of the six influencing factors[20] without splitting the file was done before a logistic regression analysis could be accomplished. This is to avoid multicollinearity. Table 11 shows which influencing factors resulted in a new one. [21]

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[18]   On the Likert scale 1 was "strongly agree" and 5 was "strongly disagree".
[19]   The means of this factor have been calculated with the mean of all eight questions belonging to this section.
[20]   The variable *brand loyalty* can be excluded from the factor analysis, as it does not significantly correlate with the other factors.
[21]   See detailed results in Appendix 7.

Table 11: Factor Analysis of Influencing Factors

Factors	Influencing factors
Factor 1: "Usage Influence"	Purchase Influence & Usage rate
Factor 2: "Experience"	Perceived quality & Satisfaction
Factor 3: "Purchase Pressure"	Group Aspiration & Purchase Intention

The analysis was accomplished in order to prove whether a conclusion on the variable *nationality* – representing the difference of brand equity in Germany and Mexico - can be drawn by differences of the independent variables of the brand equity model. Equation (1) may be transformed in the following equation (7):

(7) Δ Brand Equity = f(Δ Brand Awareness; Δ Brand Image; Δ Influencing Factors)

The logistic regression was accomplished with *nationality* as the dependent variable: Mexico is coded as "0" and Germany as "1, whereby "1" corresponds to the group for which the probability is measured. In addition, the nine factors for the brand image attributes from Table 9 and the three factors for the influencing variables from Table 11 were used as independent variables.

This approach starts from the assumption that according to the brand equity model (see equation (7)) potential regionally different characteristics of brand equity can be explained by regionally different brand dimensions and influencing factors.

Figure 1 gives an overview of the factors which have a significant influence on nationality with their according regression coefficients. The model was built using backward stepwise methods, including all of the predictors. In addition, at each step the predictor that contributed the least was removed from the model, until all of the predictors in the model were significant ($\alpha \leq 0.05$). The resulted model showed that seven out of the 12 possible variables whose influence on *nationality* should be tested were significant (see Wald statistic and significance level in the regression table of Figure 1). The results remain stable even by using any of the following stepwise methods: forward conditional, forward LR, forward Wald, backward conditional, backward LR, or backward Wald. According to the measure of Nagelkerke's R-Square, the proportion of the explained variance is 77.5%. Moreover, the classification table shows that 572 out of 633 cases (90.4%) have been correctly estimated. The seven significant factors were *basics, performance, Apple's core, exclusiveness*, and *responsibility*, which are part of the brand image, and *usage influence* and *experience* belonging to the influencing factors on brand image*. Hence, the five independent factors *purchase pressure*, *esteem, attitude, normality and convenience* are not able to differentiate the regional different brand equities. Mexican and German respondents do not differ in their answering beahavior for these five factors.

Six of the seven significant factors show positive coefficients. Due to the coding[22], this proves that with these factors the German respondents have a lower degree of agreement with the attributes or statements than the Mexicans. As an example, if the (standardized) brand image factor *performance* is increased by one standard deviation, the probability, that a German respondent is

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[22] Dependent variable: Code=1 for Germany; Independent variable: Likert scale 1="strongly agree" and 5 was "strongly disagree"

involved eight times higher than a Mexican respondent (see the respective odds *Exp(B)* in the regression table)!

Something similar accounts for the brand image factor basics (around 5 times higher), Apple's core (around four times higher)*, exclusiveness* (around six times higher), r*esponsibility* (around two times higher) and the influencing factor *usage influence* (around two times higher).

The German respondents only agree more with the influencing factor experience (which consists of perceived quality and satisfaction): an increase of this factor by one standard deviation increases the probability that a Mexican respondent is involved by double its size ($e^{(1-0,341)}$).

As a summary it can be concluded, that the iPod manages to generate agreement for the favored brand image much better in Mexico than in Germany – even though the influencing factor perceived quality is evaluated worse in Mexico. Controlled for all influencing factors, the brand equity in Mexico and Germany is different.

Figure 1: Binary Logistic Regression Model

-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
303,493[a]	,567	,775

Classification Table[a]

Observed		Predicted		
		Nationality:		Percentage Correct
		Mexican	German	
Nationality:	Mexican	195	39	83,3
	German	22	377	94,5
Overall Percentage				90,4

a. The cut value is ,500

Variables in the Equation

	B	S.E.	Wald	df	Sig.	Exp(B)
Basics	1,688	,203	69,454	1	,000	5,408
Performance	2,136	,264	65,494	1	,000	8,468
Apple_core	1,450	,209	48,242	1	,000	4,262
Exclusiveness	1,815	,208	76,179	1	,000	6,140
Responsibility	,611	,153	16,031	1	,000	1,842
Usage_Influence	,709	,191	13,710	1	,000	2,031
Experience	-1,075	,208	26,841	1	,000	,341
Constant	1,129	,159	50,119	1	,000	3,093

According to the above table, the following regression function can be retrieved:

Z = 1.129 + 1.688 × Basics + 2.136 × Performance + 1.450 × Apple's core + 1.815 × Exclusiveness + 0.611 × Responsibility + 0.709 × Usage Influence – 1.075 × Experience

5   Summary

The study comprises of a brand equity analysis of the brand iPod comparing the markets Germany and Mexico. The authors started from the overall hypothesis that – although the brand iPod is seen by media and customers as a global brand – the awareness and perception of the brand in the two countries is different. Therefore, the goal of the study was to compare brand awareness and brand image perception between Mexicans and Germans. In addition, influencing factors which might explain brand perception differences should be identifies.

The first set of results confirmed the majority of the hypotheses of the authors regarding brand awareness and brand image:

- Brand recall rates (which measures brand awareness) for the iPod are significantly different in Germany and Mexico: whereas only 62% of the Germans know the brand, 78% of Mexicans can recall it.

- Regarding the key dimensions of brand image – brand attitudes, functional brand associations, emotional brand associations and brand personality – the t-test for independent samples and the Mann-Whitney U test showed that the means of the large majority of the attributes belonging to brand image differ significantly between Germany and Mexico. Out of the 34 attributes analyzed, 28 differ significantly. However, the overall brand image of the iPod – being an aesthetic, young, stylish and easy to use brand of high-quality – was confirmed in Germany and in Mexico. But the overall strengths of the certain attributes (not the direction) is seen differently in Germany than in Mexico (e.g., both countries perceive the iPod to be "intelligent, however the Germans much less than the Mexicans). In total it can be concluded, that the Mexican students assigned better scores for the brand image dimensions than the Germans, which the researcher – except in one case – correctly predicted. It was expected that Germans would rate the functional associations more favorable than Mexicans (*see hypothesis H2.2*), however, the contrary was explored.

As explained in the beginning, a global brand by definition needs to have the same brand image around the world. Nevertheless, the brand analysis of Apple revealed that the consumers' perception of the global brand Apple is at least not perceived the same by Germans and Mexicans. According to Hsieh (2001), the extent to which a brand image is perceived similarly across nations can serve as indicator in measuring the degree of brand globalization. Consequently, due to the detected differences between Apple's brand-equity in the two countries, it can be concluded that this brand is not that global as it seems to be. This of course could have implications on Apple's marketing approach for the iPod. The partly less positive brand perceptions in Germany (e.g. seeing the iPod as a much less "innovative" and "intelligent" brand than in Mexico and also as a "mainstream" brand) might suggest, that the actual product performance or at least the communication message/tonality needs to consider counter-active measures to improve the brand image overall in these essential dimensions.

The second set of results tried to explain what is causing these differences in brand image perception. Foscht et al. (2008) already provided clear evidence that the same brand is perceived differently in different cultures in spite of its identical positioning (or identical brand identity). In addition, besides culture, the influencing factors analysis of the iPod revealed that numerous more

factors have an impact on brand image, hence on brand equity. It was proven, that especially the variables satisfaction, usage rate and influence by reference groups have a significant impact on Apple's brand image. The advantage of these influencing factors is that they can partly be influenced by marketing measures of Apple. That means, through influencing factors like customer satisfaction or recommendations by reference groups, Apple can indirectly influence its brand image. An example: Measures to reduce post-purchase customer dissatisfaction such as thank-you-letters or the encouragement of positive word-of-mouth through buzz marketing campaigns might be recommendable marketing instruments to influence brand image perception.

In conclusion, if Apple wishes to achieve the same global brand image around the world, it might be necessary not to apply the same marketing instruments in every country, but to differentiate the marketing (at least temporarily) to wipe out specific brand image weaknesses in specific countries which have been identified.

This study has several limitations that must be addressed in future research. First, the use of a student sample limits the generalization of the findings, as students represent only a subset of consumers. Future research should be conducted with a sample which is more representative of the entire consumer population. Second, it is highly recommended that the developed main and auxiliary hypotheses are tested with other global brands to generalize the findings of the study. Furthermore, besides the already analyzed factors culture, CAA, COO[23], customer commitment, usage rate, and influence by reference groups, further factors should be defined and analyzed in the same way as in this study to achieve comparability. Third, this study included only two countries, namely Mexico and Germany. Besides, the analysis of the profile line showed that the Mexican students assigned better scores for about 78% of all Likert-type questions than the Germans did. Hence, it could be concluded that the Mexicans tend to cross rather extreme responses and that this special behavior probably increased the difference of Apple's brand image in the two countries. Consequently, future research should be expanded to consumers in numerous other countries (e.g. Asian countries) to provide more comprehensive insights into consumer perceptions towards global brands. Fourth, due to apparent misunderstanding, the *questions 2.2* and *2.3* have to be re-phrased: Instead of asking in 2.2 "Do you *use* an MP3 player?, the question has to be "Do you *own* an MP3 player?" and consequently *question 2.3* needs two additional answer alternatives, first *"4 to 5"* and *"I do not use an MP3 player"*.

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[23] These factors were part of other studies than this one.

6   Appendix

Appendix 1: Questionnaires

EvaSys	English version	vividforms

Mark like this: ☐ ☒ ☐ ☐ ☐ Please use a dark pen or a felt-tip pen. This questionnaire will be read automatically.

Correction: ☐ ■ ☐ ☒ ☐ Please pay attention to the left given directions for an optimal data collection.

1. Survey

This questionnaire was developed in the framework of a university project, which is about MP3 players.
The survey is conducted among students from Mexico as well as Germany.
Please take some time to complete this questionnaire. Of course, your answers will be treated confidentially and used only for the purpose of this study.

While answering the questions, please pay attention to the following:
Please check in each case the appropriate answer or fill in the according answer in the provided place. Please use the complete scale width.

Please answer **all** of the questions as far as possible.
If you are not sure which answer to give, I ask you to make a personal estimate instead of leaving the answer blank.

2. General questions about MP3 players

2.1   Which MP3 player brands do you know? (State up to 5 brands)

2.2   Do you use an MP3 player?
       ☐ Yes (Please continue with 2.3)   ☐ No

       If your answer is NO, please hand back the questionnaire.

2.3   How many hours per day do you use the MP3 player in average?
       ☐ less than 1   ☐ 1 to 2   ☐ 2 to 3
       ☐ 3 to 4   ☐ 5 to 6   ☐ more than 6

2.4   In which situations do you use the MP3 player? (Please check all that apply)
       ☐ While doing sports   ☐ While relaxing ☐ While waiting
       ☐ While traveling   ☐ While working   ☐ Other situations

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2. General questions about MP3 players   [continuation]

2.5 Which MP3 player brand do you use (most often)?

- ☐ Creative
- ☐ Philips
- ☐ Sony
- ☐ iPod
- ☐ Samsung
- ☐ TrekStor
- ☐ Microsoft
- ☐ SanDisk
- ☐ Other

*If your answer is iPod and it was **not** a gift, please continue with „**3. Special Questions for iPod-purchasers**".*

*If your answer is **not** iPod or your iPod was a gift, please continue with „**4. Special Questions for non-iPod-purchasers**".*

3. Special questions for iPod-purchasers

3.1 How many of your (best) friends own an iPod? (in percentage)

Please indicate your degree of agreement or disagreement on the following statements.

3.2	I have bought an iPod because a friend/family member recommended it.	Strongly agree	☐	☐	☐	☐	☐	Strongly disagree
3.3	I have bought an iPod because a friend/ family member already owns an iPod.	Strongly agree	☐	☐	☐	☐	☐	Strongly disagree
3.4	People show their affiliation with a group by the ownership of an iPod.	Strongly agree	☐	☐	☐	☐	☐	Strongly disagree
3.5	People who do not own an iPod are seen as outsiders by others.	Strongly agree	☐	☐	☐	☐	☐	Strongly disagree

3.6 How many iPod(s) have you already bought? ☐ 1 ☐ 2 ☐ 3
               ☐ more than 3

3.7	I would definitely buy an iPod again if my current one got lost/stolen or if it was damaged.	Strongly agree	☐	☐	☐	☐	☐	Strongly disagree
3.8	I always need to have the latest iPod generation.	Strongly agree	☐	☐	☐	☐	☐	Strongly disagree

*Please continue with "**5. Attitude towards the brand iPod**" and the rest of the questionnaire.*

4. Special questions for non-iPod-purchasers

4.1 How many of your (best) friends own an iPod? (in percentage)

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4. Special questions for non-iPod-purchasers [continuation]

Please indicate your degree of agreement or disagreement on the following statements.

4.2	I would buy an iPod if a friend/family member recommended it.	Strongly agree	☐	☐	☐	☐	☐	Strongly disagree
4.3	I would buy an iPod if a friend/family member already owned an iPod.	Strongly agree	☐	☐	☐	☐	☐	Strongly disagree
4.4	People show their affiliation with a group by the ownership of an iPod.	Strongly agree	☐	☐	☐	☐	☐	Strongly disagree
4.5	People who do not own an iPod are seen as outsiders by others.	Strongly agree	☐	☐	☐	☐	☐	Strongly disagree
4.6	I would definitely buy an iPod if I needed a new MP3 player.	Strongly agree	☐	☐	☐	☐	☐	Strongly disagree

5. Attitude towards the brand iPod

What do you associate with the brand iPod?
iPods...

5.1	Are a symbol of liberty	Strongly agree	☐	☐	☐	☐	☐	Strongly disagree
5.2	Are products for show-offs	Strongly agree	☐	☐	☐	☐	☐	Strongly disagree
5.3	Are a mean of self-expression	Strongly agree	☐	☐	☐	☐	☐	Strongly disagree
5.4	Are too expensive	Strongly agree	☐	☐	☐	☐	☐	Strongly disagree
5.5	Are something for followers	Strongly agree	☐	☐	☐	☐	☐	Strongly disagree
5.6	Just need to be loved	Strongly agree	☐	☐	☐	☐	☐	Strongly disagree
5.7	Are not better than other MP3 players	Strongly agree	☐	☐	☐	☐	☐	Strongly disagree
5.8	Fill their owners with pride	Strongly agree	☐	☐	☐	☐	☐	Strongly diagree

6. Functional associations with the brand iPod

iPods are...

6.1	High-quality products	Strongly agree	☐	☐	☐	☐	☐	Strongly disagree
6.2	Multifunctional	Strongly agree	☐	☐	☐	☐	☐	Strongly disagree
6.3	Easy-to-use	Strongly agree	☐	☐	☐	☐	☐	Strongly disagree
6.4	Inflexible (e.g. only in combination with iTunes)	Strongly agree	☐	☐	☐	☐	☐	Strongly disagree
6.5	Powerful	Strongly agree	☐	☐	☐	☐	☐	Strongly disagree
6.6	Satisfactory	Strongly agree	☐	☐	☐	☐	☐	Strongly disagree
6.7	Time-saving	Strongly agree	☐	☐	☐	☐	☐	Strongly disagree
6.8	Elegant	Strongly agree	☐	☐	☐	☐	☐	Strongly disagree

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6. Functional associations with the brand iPod   [continuation]

6.9   From the attributes mentioned above, please choose **the one** that desribes an iPod the best.

7. Emotional associations with the brand iPod

iPods are...

7.1	A "must-have"	Strongly agree	☐ ☐ ☐ ☐ ☐	Strongly disagree
7.2	Inspirational	Strongly agree	☐ ☐ ☐ ☐ ☐	Strongly disagree
7.3	Different	Strongly agree	☐ ☐ ☐ ☐ ☐	Strongly disagree
7.4	Exaggerated	Strongly agree	☐ ☐ ☐ ☐ ☐	Strongly disagree
7.5	Innovative	Strongly agree	☐ ☐ ☐ ☐ ☐	Strongly disagree
7.6	Mainstream (everyone owns one)	Strongly agree	☐ ☐ ☐ ☐ ☐	Strongly disagree

7.7   From the attributes mentioned above, please choose **the one** that desribes an iPod the best.

8. Personality of the brand iPod

Imagine an iPod was a person, how much do you agree on the following characteristics?

An iPod as a person is...

8.1	Aesthetic	Strongly agree	☐ ☐ ☐ ☐ ☐	Strongly disagree
8.2	Cool	Strongly agree	☐ ☐ ☐ ☐ ☐	Strongly disagree
8.3	Cocky	Strongly agree	☐ ☐ ☐ ☐ ☐	Strongly disagree
8.4	American	Strongly agree	☐ ☐ ☐ ☐ ☐	Strongly disagree
8.5	Creative	Strongly agree	☐ ☐ ☐ ☐ ☐	Strongly disagree
8.6	Sophisticated	Strongly agree	☐ ☐ ☐ ☐ ☐	Strongly disagree
8.7	Full of the joys of life	Strongly agree	☐ ☐ ☐ ☐ ☐	Strongly disagree
8.8	Passionate	Strongly agree	☐ ☐ ☐ ☐ ☐	Strongly disagree
8.9	Intelligent	Strongly agree	☐ ☐ ☐ ☐ ☐	Strongly disagree
8.10	Social responsible	Strongly agree	☐ ☐ ☐ ☐ ☐	Strongly disagree

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8. Personality of the brand iPod [Fortsetzung]

8.11	Trustworthy	Strongly agree	□	□	□	□	□	Strongly disagree
8.12	Stylish	Strongly agree	□	□	□	□	□	Strongly disagree
8.13	Unique	Strongly agree	□	□	□	□	□	Strongly disagree
8.14	Young	Strongly agree	□	□	□	□	□	Strongly disagree

8.15 From the attributes mentioned above, please choose **three** that desribe an iPod the best.

9. Personal data

9.1 Gender:
□ male   □ female

9.2 Age:
□ 18 or younger   □ 19   □ 20
□ 21   □ 22   □ 23
□ 24 or older

9.3 Nationality
□ Mexican   □ German   □ Other

Thank you very much for your participation!

Appendix 2: Guideline for the Conduction of the Mexican Survey

1) Preparation for the survey
Please select suitable courses and talk to the professors one by one about their opinion and permission to conduct some of the questionnaires in her/his class.

Interviewee requirements:
- Gender: female and male
- Mexican citizen (international students will be sorted out later on)
- Age range: 19 – 23 (4th semester or higher)
- Faculty: business and management

2) Arrival of the questionnaires at the post office at Tec
- Date of arrival: *Monday, April 27th 2009*
- It will be a package of 320 questionnaires
- Ask the secretary on Monday, April 27th if a package with Prof. Cesar J. Sepulveda's name on it has arrived to TEC and pick it up.
- Please try to get all the questionnaires filled out by the students. Some of them will make mistakes when filling out the questionnaire (leaving spaces blank, crossing too many choices and so on) and therefore we need enough backup.

3) Information for the students <u>before</u> you hand out the questionnaires
- When you go to the classes please ask the students, if they are from Mexico. The ones who are not from Mexico can leave the classroom.
- Please tell them, that they are participating in an international study regarding MP3-Players. And that the study is a joint project from Tecnólogico de Monterrey with Pforzheim University in Germany.
- In order to get the best possible results they should follow the instructions, answer all questions carefully and leave nothing blank. If they are not sure they shall make a guess.
- Tell them, that they should not part the pages, it is highly important that the pages stay in the right order and together. If the pages nevertheless get parted please staple them together in the same manner as they have been (middle of page and close to top margin).

<u>Please give them the following really important instructions:</u>
- They have to use a dark color (black, blue), not a fat felt-tip or pencil.
- They need to cross the answers. If the make a mistake they need to fill out the field and make a cross for the right answer.

<u>Example:</u>

Wrong answer   Right answer
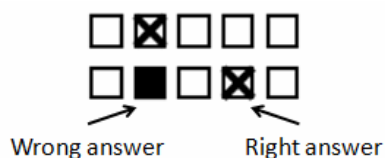
- If there is an empty space they have to write the answer into this field. They should really avoid leaving something blank. They should write their answers one by one in the empty field, so that the order can be detected.

Example:

2. Preguntas generales considerando resproductores de MP3

2.1 ¿Cuáles marcas de reproductores de MP3 conoces? (Contesta hasta 5 marcas)

iPod, Samsung, Sony, Creative, Philips

Please tell them that they have often to state their agreement with a stated fact

Example:

4. Preguntas especiales para personas que no compraron un iPod   [Fortsetzung]

4.3	Me compraría un iPod si un amigo/miembro de familia ya tuviera un iPod.	Completamente de acuerdo	☐	☐	☐	☐	☐	Completamente en desacuerdo
4.4	Gente que tiene un iPod simboliza pertenencia a un grupo.	Completamente de acuerdo	☐	☐	☐	☐	☐	Completamente en desacuerdo
4.5	Gente que no tiene un iPod es considerado marginado.	Completamente de acuerdo	☐	☐	☐	☐	☐	Completamente en desacuerdo
4.6	Si necesitara un reproductor de MP3 nuevo, me compraría un iPod.	Completamente de acuerdo	☐	☐	☐	☐	☐	Completamente en desacuerdo

For a better understanding you can tell them what the fields in between mean:
The first field means „completamente de acuerdo"

The second field means „de acuerdo"

The third field means „ni de acuerdo ni en desacuerdo"

The fourth field means „en desacuerdo"

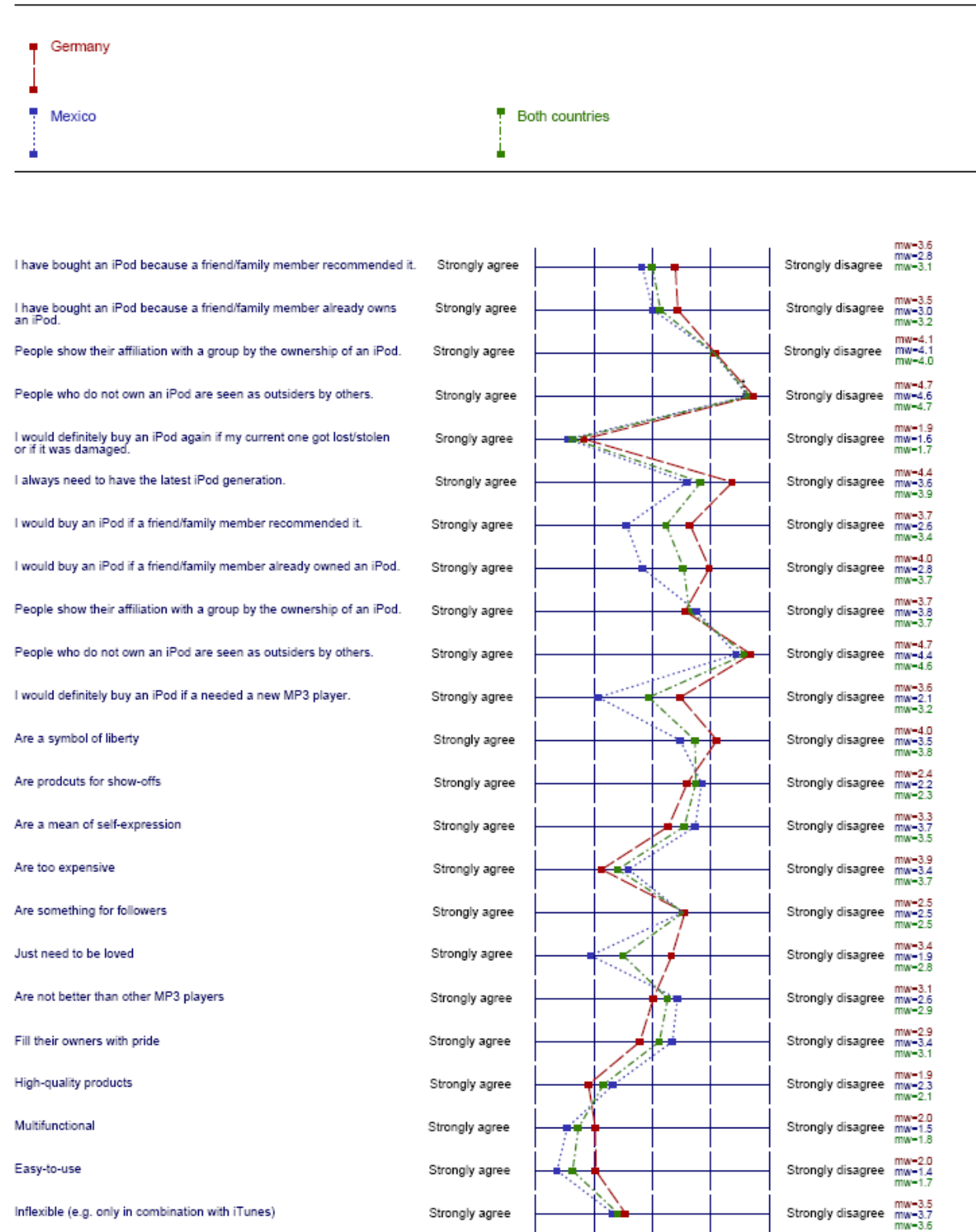The fifth field means „completamente en desacuerdo"

- After having given the students the instructions, hand out the questionnaires
- After the students have finished the questionnaires, collect and count them.
- Put the completed questionnaires back into the package and write us an email, so that *we* can call FedEx to pick up the package at TEC and send it back to Pforzheim University. We manage the whole back sending process. You only have to give the package with the questionnaire to the FedEx delivery boy.
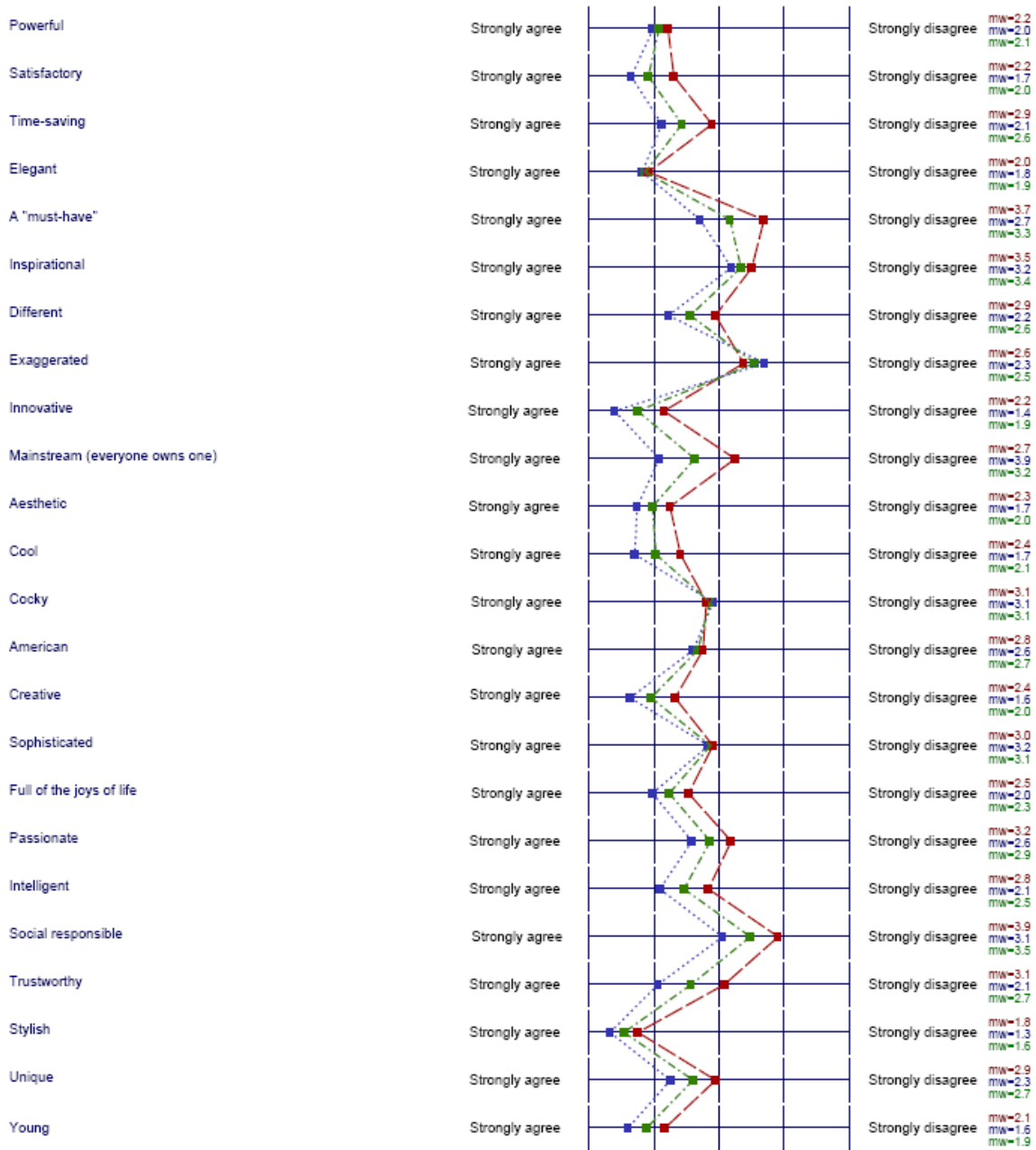
Appendix 3: The most relevant Attributes for iPod and their Sources

Attributes	Sources
Aesthetic	"Aesthetics play a key role in such brands as […] Apple computers […]" (Kotler and Keller 2009, p. 363); "[Apple] took care to differentiate itself from its competitors through its aesthetic design and innovative features, for its products." (Philkhana and John 2007, p. 2)
American	„iPod soon became a symbol of American pop culture" (Verma 2006, p. 5)
Cool	"[…] the most important aspect of this success story is that Apple was able to extend the iPod market from the group of early adopters to the early majority "without diminishing the product's cool factor" (Olson et al. 2005, p. 14); "A product that had become so cool and funky that it becomes a social accessory as much as anything else." (Vandermerwe and Taishoff 2004, p. 2)
Creative Easy-to-use	"The Company is therefore uniquely positioned to offer superior and well-integrated digital lifestyle products and solutions, which are further enhanced by the Company's emphasis on ease-of-use and creative industrial designs." Apple Inc. (2008, p. 33); "[…] Apple, which has a reputation for simply designed and easy-to-use products." (Trott 2008, p. 32)
Elegant	iPod as "an elegant method of promoting individual choice" (Anderson 2005, p. 29)
Different	"Think different"
Iconic	"[…] for the iconic brand and market leader, iPod" (Reppel et al. 2006, p. 241; "Thanks to its sleek design, it soon became an icon of the Digital Age." (Yoffie and Slind 2008, p. 10)
Inflexible Expensive	"[…] Music downloaded from iTunes could only be played on the iPod, and of course, retail price was high relative to competition." (Crawford and Di Benedetto 2008, p. 313); "[…] iTunes works only with iPods, and iPods play only music purchased from iTunes." (Nightingale and Syed 2008, p. 8)
Intelligent	"It's like having your own highly intelligent, personal DJ." (Apple Inc. (URL6))
Fill their owners with pride	"The iPod is not only easy to use, but it also makes its users feel proud, which, in turn, helps them to feel good." (Reppel et al. 2006, p. 244)
Individual	"The iPod's design satisfies users' desire for beauty and helps them to feel individual." (Reppel et al. 2006, p. 244)
Innovative	"The Company is focused on providing innovative products and solutions to consumer, SMB, education, enterprise, government and creative customers that greatly enhance their evolving digital lifestyles." (Apple Inc. 2008, p. 33)
Multi-functional	"The iPod's functionality extends beyond playing music and listening to audio books. Other key capabilities include data storage, calendar and contact information utility, and a selection of games. With the addition of third-party iPod peripherals, the capabilities of certain iPods can be enhanced to include voice recording and photo downloading directly from certain digital cameras." (Apple Inc. 2004, p. 5)
Must-have	"[…] these pocket-sized pleasure zones have become the first must-have accessory of the 21st century" (Vandermerwe and Taishoff 2004, p. 2); "[The iPod] was extremely fashionable and immediately became a must-have for the trendy set." (Hennessy 2004, p. 4)
Passionate	It is said that both people working for Apple and fans of its products are passionate and proud to be part of the Apple community (Heracleous and Papachroni 2009, p. 13).
Satisfactory	"[…] the iPod's durability is gradually improving with each new model and surveys show that users' satisfaction remains above those of competitors" (Wingfield 2006, p. DI)
Social responsible	"Apple recognizes its responsibility as a global citizen and continually strives to reduce the environmental impact of the work we do and the products we create, e.g. Apple is on track to eliminate toxic chemicals from its products." (Apple Inc. (URL5))
Sophisticated	"[…] many consumers were under the impression that it was a sophisticated device for tech fans, rather than the average music lover." (Keller 2008, p. 244)
Stylish	"Research findings reveal just how important design is in how customers feel about their iPods. […] The research makes clear that a key attribute of importance for the iPod user is its design." (Reppel et al. 2006, pp. 244)
Unique	"The Company believes it is unique in that it designs and develops nearly the entire solution for its personal computers, consumer electronics, and mobile communication devices, including the hardware, operating system, several software applications, and related services." (Apple Inc. 2008, p.15)
User-friendly	"Apple Computers have always been designed to look user-friendly." (Crawford and Di Benedetto 2008, p. 294)
Young	"[…] among the target group iPods are popular, it is seen as hip, young and fashionable" and "it pushes a strong identification with everything young, up-to the minute and smart" (Nightingale & Syed 2008, p. 8)

Appendix 4: Profile Line of all Likert-type Questions

Profile line

Germany
Mexico
Both countries

Question		mw (Germany)	mw (Mexico)	mw (Both)
I have bought an iPod because a friend/family member recommended it.	Strongly agree … Strongly disagree	3.6	2.8	3.1
I have bought an iPod because a friend/family member already owns an iPod.	Strongly agree … Strongly disagree	3.5	3.0	3.2
People show their affiliation with a group by the ownership of an iPod.	Strongly agree … Strongly disagree	4.1	4.1	4.0
People who do not own an iPod are seen as outsiders by others.	Strongly agree … Strongly disagree	4.7	4.6	4.7
I would definitely buy an iPod again if my current one got lost/stolen or if it was damaged.	Srongly agree … Strongly disagree	1.9	1.6	1.7
I always need to have the latest iPod generation.	Strongly agree … Strongly disagree	4.4	3.6	3.9
I would buy an iPod if a friend/family member recommended it.	Strongly agree … Strongly disagree	3.7	2.6	3.4
I would buy an iPod if a friend/family member already owned an iPod.	Strongly agree … Strongly disagree	4.0	2.8	3.7
People show their affiliation with a group by the ownership of an iPod.	Strongly agree … Strongly disagree	3.7	3.8	3.7
People who do not own an iPod are seen as outsiders by others.	Strongly agree … Strongly disagree	4.7	4.4	4.6
I would definitely buy an iPod if a needed a new MP3 player.	Strongly agree … Strongly disagree	3.6	2.1	3.2
Are a symbol of liberty	Strongly agree … Strongly disagree	4.0	3.5	3.8
Are prodcuts for show-offs	Strongly agree … Strongly disagree	2.4	2.2	2.3
Are a mean of self-expression	Strongly agree … Strongly disagree	3.3	3.7	3.5
Are too expensive	Strongly agree … Strongly disagree	3.9	3.4	3.7
Are something for followers	Strongly agree … Strongly disagree	2.5	2.5	2.5
Just need to be loved	Strongly agree … Strongly disagree	3.4	1.9	2.8
Are not better than other MP3 players	Strongly agree … Strongly disagree	3.1	2.6	2.9
Fill their owners with pride	Strongly agree … Strongly disagree	2.9	3.4	3.1
High-quality products	Strongly agree … Strongly disagree	1.9	2.3	2.1
Multifunctional	Strongly agree … Strongly disagree	2.0	1.5	1.8
Easy-to-use	Strongly agree … Strongly disagree	2.0	1.4	1.7
Inflexible (e.g. only in combination with iTunes)	Strongly agree … Strongly disagree	3.5	3.7	3.6

Powerful	Strongly agree	Strongly disagree	mw=2.2 mw=2.0 mw=2.1
Satisfactory	Strongly agree	Strongly disagree	mw=2.2 mw=1.7 mw=2.0
Time-saving	Strongly agree	Strongly disagree	mw=2.9 mw=2.1 mw=2.6
Elegant	Strongly agree	Strongly disagree	mw=2.0 mw=1.8 mw=1.9
A "must-have"	Strongly agree	Strongly disagree	mw=3.7 mw=2.7 mw=3.3
Inspirational	Strongly agree	Strongly disagree	mw=3.5 mw=3.2 mw=3.4
Different	Strongly agree	Strongly disagree	mw=2.9 mw=2.2 mw=2.6
Exaggerated	Strongly agree	Strongly disagree	mw=2.6 mw=2.3 mw=2.5
Innovative	Strongly agree	Strongly disagree	mw=2.2 mw=1.4 mw=1.9
Mainstream (everyone owns one)	Strongly agree	Strongly disagree	mw=2.7 mw=3.9 mw=3.2
Aesthetic	Strongly agree	Strongly disagree	mw=2.3 mw=1.7 mw=2.0
Cool	Strongly agree	Strongly disagree	mw=2.4 mw=1.7 mw=2.1
Cocky	Strongly agree	Strongly disagree	mw=3.1 mw=3.1 mw=3.1
American	Strongly agree	Strongly disagree	mw=2.8 mw=2.6 mw=2.7
Creative	Strongly agree	Strongly disagree	mw=2.4 mw=1.6 mw=2.0
Sophisticated	Strongly agree	Strongly disagree	mw=3.0 mw=3.2 mw=3.1
Full of the joys of life	Strongly agree	Strongly disagree	mw=2.5 mw=2.0 mw=2.3
Passionate	Strongly agree	Strongly disagree	mw=3.2 mw=2.6 mw=2.9
Intelligent	Strongly agree	Strongly disagree	mw=2.8 mw=2.1 mw=2.5
Social responsible	Strongly agree	Strongly disagree	mw=3.9 mw=3.1 mw=3.5
Trustworthy	Strongly agree	Strongly disagree	mw=3.1 mw=2.1 mw=2.7
Stylish	Strongly agree	Strongly disagree	mw=1.8 mw=1.3 mw=1.6
Unique	Strongly agree	Strongly disagree	mw=2.9 mw=2.3 mw=2.7
Young	Strongly agree	Strongly disagree	mw=2.1 mw=1.6 mw=1.9

Appendix 5: T-Test for Independent Samples and U-Test

1. Brand Attitude

Independent Samples Test

| | | Levene's Test for Equality of Variances | | t-test for Equality of Means | | | | | | |
| | | | | | | | | | 95% Confidence Interval of the Difference | |
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Are a symbol of liberty	Equal variances assumed	21,727	,000	-5,858	538	,000	-,560	,096	-,747	-,372
	Equal variances not assumed			-5,679	432,915	,000	-,560	,099	-,753	-,366
Are a mean of self-expression	Equal variances assumed	2,166	,142	3,974	538	,000	,432	,109	,218	,646
	Equal variances not assumed			4,009	514,575	,000	,432	,108	,220	,644
Just need to be loved	Equal variances assumed	27,158	,000	-14,158	537	,000	-1,426	,101	-1,624	-1,228
	Equal variances not assumed			-14,592	536,440	,000	-1,426	,098	-1,618	-1,234
Fill their owners with pride	Equal variances assumed	6,150	,013	3,985	538	,000	,419	,105	,212	,626
	Equal variances not assumed			3,950	483,993	,000	,419	,106	,211	,627
Are no products for show-offs	Equal variances assumed	,229	,633	2,458	540	,014	,264	,107	,053	,475
	Equal variances not assumed			2,446	492,818	,015	,264	,108	,052	,476
Are not too expensive	Equal variances assumed	6,066	,014	5,065	541	,000	,474	,094	,290	,658
	Equal variances not assumed			4,990	471,254	,000	,474	,095	,287	,661
Are nothing for followers	Equal variances assumed	,107	,744	-,119	538	,905	-,013	,110	-,229	,202
	Equal variances not assumed			-,119	493,799	,906	-,013	,110	-,229	,203
Are not better than other MP3 players	Equal variances assumed	1,225	,269	-4,488	536	,000	-,522	,116	-,750	-,293
	Equal variances not assumed			-4,474	493,209	,000	-,522	,117	-,751	-,293

Ranks

	Nationality	N	Mean Rank	Sum of Ranks
Are a symbol of liberty	Mexican	234	232,18	54330,00
	German	306	299,80	91740,00
	Total	540		
Are a mean of self-expression	Mexican	233	299,83	69861,00
	German	307	248,24	76209,00
	Total	540		
Just need to be loved	Mexican	234	179,04	41894,50
	German	305	339,79	103635,50
	Total	539		
Fill their owners with pride	Mexican	234	300,06	70214,50
	German	306	247,89	75855,50
	Total	540		
Are no products for show-offs	Mexican	234	292,40	68421,50
	German	308	255,62	78731,50
	Total	542		
Are not too expensive	Mexican	234	308,26	72132,50
	German	309	244,54	75563,50
	Total	543		
Are nothing for followers	Mexican	232	269,87	62610,50
	German	308	270,97	83459,50
	Total	540		
Are better than other MP3 players	Mexican	233	302,87	70568,50
	German	305	244,01	74422,50
	Total	538		

Test Statistics[a]

	Are a symbol of liberty	Are a mean of self-expression	Just need to be loved	Fill their owners with pride	Are no products for show-offs	Are not too expensive	Are nothing for followers	Are better than other MP3 players
Mann-Whitney U	26835,000	28931,000	14399,500	28884,500	31145,500	27668,500	35582,500	27757,500
Wilcoxon W	54330,000	76209,000	41894,500	75855,500	78731,500	75563,500	62610,500	74422,500
Z	-5,206	-3,918	-12,161	-3,960	-2,809	-4,865	-,083	-4,448
Asymp. Sig. (2-tailed)	,000	,000	,000	,000	,005	,000	,933	,000

a. Grouping Variable: Nationality

2. Functional Brand Association

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference		Lower	Upper
Multifunctional	Equal variances assumed	,433	,511	-6,115	539	,000	-,431	,071		-,570	-,293
	Equal variances not assumed			-6,201	523,986	,000	-,431	,070		-,568	-,295
Easy-to-use	Equal variances assumed	19,642	,000	-9,789	536	,000	-,668	,068		-,802	-,534
	Equal variances not assumed			-10,228	533,512	,000	-,668	,065		-,796	-,540
Powerful	Equal variances assumed	7,213	,007	-2,698	534	,007	-,211	,078		-,364	-,057
	Equal variances not assumed			-2,607	421,989	,009	-,211	,081		-,369	-,052
Time-saving	Equal variances assumed	14,115	,000	-8,618	535	,000	-,810	,094		-,995	-,625
	Equal variances not assumed			-8,465	462,603	,000	-,810	,096		-,998	-,622
Elegant	Equal variances assumed	3,322	,069	-1,832	536	,068	-,163	,089		-,338	,012
	Equal variances not assumed			-1,823	491,723	,069	-,163	,089		-,339	,013
Flexible	Equal variances assumed	3,677	,056	-1,744	534	,082	-,19027	,10910		-,40459	,02405
	Equal variances not assumed			-1,722	474,776	,086	-,19027	,11048		-,40737	,02683

Ranks

	Nationality	N	Mean Rank	Sum of Ranks
Multifunctional	Mexican	234	224,90	52626,00
	German	307	306,14	93985,00
	Total	541		
Easy-to-use	Mexican	233	203,41	47394,00
	German	305	319,99	97597,00
	Total	538		
Powerful	Mexican	234	241,40	56488,00
	German	302	289,50	87428,00
	Total	536		
Time-saving	Mexican	234	206,51	48324,50
	German	303	317,26	96128,50
	Total	537		
Elegant	Mexican	234	251,75	58909,00
	German	304	283,16	86082,00
	Total	538		
Flexible	Mexican	234	252,29	59035,50
	German	302	281,06	84880,50
	Total	536		

Test Statistics[a]

	Multifunctional	Easy-to-use	Powerful	Time-saving	Elegant	Flexible
Mann-Whitney U	25131,000	20133,000	28993,000	20829,500	31414,000	31540,500
Wilcoxon W	52626,000	47394,000	56488,000	48324,500	58909,000	59035,500
Z	-6,463	-9,358	-3,769	-8,502	-2,480	-2,200
Asymp. Sig. (2-tailed)	,000	,000	,000	,000	,013	,028

a. Grouping Variable: Nationality

3. Emotional Brand Association

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means					95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
A "must-have"	Equal variances assumed	3,763	,053	-9,393	536	,000	-,992	,106	-1,200	-,785
	Equal variances not assumed			-9,238	464,676	,000	-,992	,107	-1,203	-,781
Inspirational	Equal variances assumed	6,794	,009	-3,427	537	,001	-,346	,101	-,544	-,148
	Equal variances not assumed			-3,345	447,412	,001	-,346	,103	-,549	-,143
Different	Equal variances assumed	,624	,430	-6,944	533	,000	-,701	,101	-,899	-,502
	Equal variances not assumed			-6,935	496,475	,000	-,701	,101	-,899	-,502
Innovative	Equal variances assumed	29,443	,000	-10,737	536	,000	-,820	,076	-,970	-,670
	Equal variances not assumed			-11,268	530,270	,000	-,820	,073	-,963	-,677
Unexaggerated	Equal variances assumed	2,117	,146	3,385	535	,001	,32686	,09657	,13716	,51656
	Equal variances not assumed			3,404	509,481	,001	,32686	,09601	,13823	,51549
Not mainstream	Equal variances assumed	,031	,860	-13,738	535	,000	-1,170	,085	-1,337	-1,002
	Equal variances not assumed			-13,700	494,039	,000	-1,170	,085	-1,337	-1,002

Ranks

	Nationality	N	Mean Rank	Sum of Ranks
A "must-have"	Mexican	233	205,14	47797,00
	German	305	318,67	97194,00
	Total	538		
Inspirational	Mexican	233	247,21	57600,00
	German	306	287,35	87930,00
	Total	539		
Different	Mexican	233	217,53	50685,50
	German	302	306,94	92694,50
	Total	535		
Innovative	Mexican	233	193,90	45178,50
	German	305	327,25	99812,50
	Total	538		
Unexaggerated	Mexican	233	295,42	68833,00
	German	304	248,75	75620,00
	Total	537		
Not mainstream	Mexican	233	180,31	42012,00
	German	304	336,98	102441,00
	Total	537		

Test Statistics[a]

	A "must-have"	Inspirational	Different	Innovative	Unexaggerated	Not mainstream
Mann-Whitney U	20536,000	30339,000	23424,500	17917,500	29260,000	14751,000
Wilcoxon W	47797,000	57600,000	50685,500	45178,500	75620,000	42012,000
Z	-8,604	-3,059	-6,832	-10,581	-3,574	-12,020
Asymp. Sig. (2-tailed)	,000	,002	,000	,000	,000	,000

a. Grouping Variable: Nationality

4. Brand Personality

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Aesthetic	Equal variances assumed	,849	,357	-6,249	530	,000	-,540	,086	-,709	-,370
	Equal variances not assumed			-6,327	516,644	,000	-,540	,085	-,707	-,372
Cool	Equal variances assumed	3,699	,055	-8,569	533	,000	-,718	,084	-,882	-,553
	Equal variances not assumed			-8,669	519,683	,000	-,718	,083	-,880	-,555
American	Equal variances assumed	20,512	,000	-1,963	533	,050	-,224	,114	-,447	,000
	Equal variances not assumed			-1,918	448,460	,056	-,224	,117	-,453	,005
Creative	Equal variances assumed	1,027	,311	-8,888	536	,000	-,734	,083	-,896	-,571
	Equal variances not assumed			-8,944	512,234	,000	-,734	,082	-,895	-,572
Full of the joys of life	Equal variances assumed	,674	,412	-5,878	533	,000	-,555	,094	-,740	-,369
	Equal variances not assumed			-5,792	468,423	,000	-,555	,096	-,743	-,366
Passionate	Equal variances assumed	11,331	,001	-6,418	533	,000	-,675	,105	-,882	-,468
	Equal variances not assumed			-6,323	469,022	,000	-,675	,107	-,885	-,465
Intelligent	Equal variances assumed	7,147	,008	-7,373	532	,000	-,715	,097	-,906	-,525
	Equal variances not assumed			-7,193	444,367	,000	-,715	,099	-,911	-,520
Social responsible	Equal variances assumed	14,345	,000	-8,904	522	,000	-,789	,089	-,963	-,615
	Equal variances not assumed			-8,518	389,830	,000	-,789	,093	-,971	-,607
Trustworthy	Equal variances assumed	,871	,351	-11,070	522	,000	-1,031	,093	-1,214	-,848
	Equal variances not assumed			-11,007	470,151	,000	-1,031	,094	-1,215	-,847
Stylish	Equal variances assumed	23,986	,000	-5,899	527	,000	-,418	,071	-,558	-,279
	Equal variances not assumed			-6,178	526,422	,000	-,418	,068	-,551	-,285
Unique	Equal variances assumed	,234	,629	-6,660	525	,000	-,689	,104	-,893	-,486
	Equal variances not assumed			-6,698	490,214	,000	-,689	,103	-,892	-,487
Young	Equal variances assumed	4,059	,044	-6,184	525	,000	-,535	,086	-,704	-,365
	Equal variances not assumed			-6,392	522,787	,000	-,535	,084	-,699	-,370
Not cocky	Equal variances assumed	1,409	,236	,445	535	,656	,04887	,10978	-,16678	,26452
	Equal variances not assumed			,441	482,385	,659	,04887	,11080	-,16884	,26658
Not sophisticated	Equal variances assumed	21,628	,000	-1,245	535	,214	-,120	,096	-,309	,069
	Equal variances not assumed			-1,207	431,017	,228	-,120	,099	-,315	,075

Ranks

	Nationality	N	Mean Rank	Sum of Ranks
Aesthetic	Mexican	232	219,75	50983,00
	German	300	302,65	90795,00
	Total	532		
Cool	Mexican	234	203,28	47567,50
	German	301	318,31	95812,50
	Total	535		
American	Mexican	233	250,99	58480,00
	German	302	281,13	84900,00
	Total	535		
Creative	Mexican	234	202,15	47303,50
	German	304	321,34	97687,50
	Total	538		
Full of the joys of life	Mexican	233	219,46	51134,00
	German	302	305,45	92246,00
	Total	535		
Passionate	Mexican	234	222,89	52156,50
	German	301	303,07	91223,50
	Total	535		
Intelligent	Mexican	233	208,97	48689,00
	German	301	312,81	94156,00
	Total	534		

Ranks

	Nationality	N	Mean Rank	Sum of Ranks
Social responsible	Mexican	224	205,45	46020,00
	German	300	305,10	91530,00
	Total	524		
Trustworthy	Mexican	224	186,89	41864,00
	German	300	318,95	95686,00
	Total	524		
Stylish	Mexican	226	222,13	50202,50
	German	303	296,97	89982,50
	Total	529		
Unique	Mexican	224	216,01	48386,00
	German	303	299,48	90742,00
	Total	527		
Young	Mexican	225	218,10	49073,50
	German	302	298,19	90054,50
	Total	527		
Not cocky	Mexican	234	272,50	63765,00
	German	303	266,30	80688,00
	Total	537		
Not sophisticated	Mexican	233	261,02	60817,50
	German	304	275,12	83635,50
	Total	537		

Test Statistics[a]

	Aesthetic	Cool	American	Creative	Full of the joys of life	Passionate	Intelligent
Mann-Whitney U	23955,000	20072,500	31219,000	19808,500	23873,000	24661,500	21428,000
Wilcoxon W	50983,000	47567,500	58480,000	47303,500	51134,000	52156,500	48689,000
Z	-6,499	-9,003	-2,293	-9,275	-6,635	-6,116	-7,969
Asymp. Sig. (2-tailed)	,000	,000	,022	,000	,000	,000	,000

a. Grouping Variable: Nationality.

Test Statistics[a]

	Social responsible	Trustworthy	Stylish	Unique	Young	Not cocky	Not sophisticated
Mann-Whitney U	20820,000	16664,000	24551,500	23186,000	23648,500	34632,000	33556,500
Wilcoxon W	46020,000	41864,000	50202,500	48386,000	49073,500	80688,000	60817,500
Z	-7,775	-10,188	-6,366	-6,403	-6,373	-,471	-1,086
Asymp. Sig. (2-tailed)	,000	,000	,000	,000	,000	,638	,278

a. Grouping Variable: Nationality.

Appendix 6: Factor analysis of the brand image sub-dimensions

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		,822
Bartlett's Test of Sphericity	Approx. Chi-Square	3900,281
	df	561
	Sig.	,000

Total Variance Explained

Com-ponent	Initial Eigenvalues			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	5,464	16,070	16,070	3,727	10,962	10,962
2	3,124	9,189	25,259	2,910	8,558	19,520
3	2,680	7,883	33,142	2,721	8,002	27,523
4	2,083	6,125	39,267	2,628	7,730	35,253
5	1,662	4,888	44,156	2,058	6,054	41,306
6	1,231	3,621	47,776	1,674	4,923	46,230
7	1,152	3,388	51,164	1,309	3,851	50,081
8	1,089	3,204	54,368	1,304	3,834	53,915
9	1,036	3,046	57,414	1,190	3,499	57,414
10	,980	2,883	60,297			
11	,892	2,625	62,922			
12	,847	2,492	65,414			
13	,824	2,423	67,837			
14	,805	2,369	70,206			
15	,781	2,298	72,504			
16	,727	2,140	74,644			
17	,665	1,957	76,600			
18	,636	1,872	78,472			
19	,595	1,749	80,221			
20	,582	1,712	81,933			
21	,573	1,684	83,617			
22	,560	1,647	85,264			
23	,545	1,602	86,867			
24	,501	1,473	88,339			
25	,478	1,406	89,745			
26	,448	1,319	91,064			
27	,439	1,292	92,356			
28	,427	1,255	93,610			
29	,404	1,187	94,797			
30	,391	1,149	95,946			
31	,361	1,061	97,007			
32	,353	1,039	98,046			
33	,343	1,009	99,056			
34	,321	,944	100,000			

Extraction Method: Principal Component Analysis.

Rotated Component Matrix[a]

	Component								
	1	2	3	4	5	6	7	8	9
Are a symbol of liberty	,043	,401	,433	,136	-,071	-,020	,103	-,216	,218
Are a mean of self-expression	,012	-,056	,805	-,050	-,056	-,021	-,100	-,097	,044
Just need to be loved	,172	,669	,109	,163	,026	-,058	,173	,016	-,023
Fill their owners with pride	,018	,153	,639	-,018	-,084	,037	-,293	-,008	-,034
Multifunctional	-,016	,683	-,089	,043	,126	-,088	-,035	,123	-,129
Easy-to-use	,067	,666	-,066	,060	,065	-,030	,211	-,076	-,031
Powerful	-,010	,662	-,048	,090	-,044	,017	-,360	,093	,050
Time-saving	,064	,645	,015	,063	-,036	-,009	-,021	-,102	,268
Elegant	,471	,192	,179	-,050	-,061	-,079	-,449	,076	,079
A "must-have"	,675	,158	-,012	,166	,113	,103	-,027	-,024	,035
Inspirational	,607	,009	-,013	-,020	,215	,160	-,200	,129	,224
Different	,522	,020	-,065	,000	,308	,091	-,057	,050	,412
Innovative	,622	,049	,009	,092	,236	-,111	,173	-,052	,169
Aesthetic	,755	,018	-,013	,061	-,017	-,079	,075	,037	-,193
Cool	,757	,047	-,036	,083	,183	,084	,083	-,079	-,102
American	,169	,020	,004	,046	-,104	,565	,280	,166	-,268
Creative	,555	,021	-,039	,043	,384	-,020	,282	-,007	-,004
Full of the joys of life	,441	,028	,003	,139	,641	-,128	,040	-,079	-,008
Passionate	,326	,074	-,027	,058	,729	-,042	,068	,040	,071
Intelligent	,216	,119	-,061	,463	,355	-,098	,063	,087	,073
Social responsible	,126	,172	-,061	,460	-,137	-,058	,189	,204	,485
Trustworthy	,123	,160	-,080	,615	-,030	-,124	,170	,248	,321
Stylish	,039	,045	,060	,772	-,019	,133	-,096	-,098	-,052
Unique	,043	,051	-,020	,741	,050	-,077	,051	,007	,069
Young	,048	,053	-,026	,722	,095	,042	-,014	-,090	-,127
Are no products for show-offs	-,045	-,179	,788	-,043	,091	-,016	,032	,080	-,067
Are not too expensive	-,007	-,236	,417	,019	-,012	,033	-,195	,463	-,336
Are nothing for followers	-,043	-,121	,721	-,015	,006	,011	,186	,247	-,022
Are better than other MP3 players	-,064	-,439	,242	,038	,049	-,059	-,004	,201	-,028
Flexible	,005	-,040	,061	-,013	,007	,024	,015	,824	,086
Unexaggerated	-,189	-,109	,089	-,082	,050	,697	,007	-,082	,390
Not mainstream	,217	,219	-,055	,064	,044	,156	,623	,010	,119
Not cocky	,076	-,040	-,057	,001	,096	,780	,006	-,010	-,049
Not sophisticated	,149	-,035	,000	,010	,699	,259	-,045	,000	-,071

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 11 iterations.

Appendix 7: Factor Analysis of Influencing Factors

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		,559
Bartlett's Test of Sphericity	Approx. Chi-Square	36,925
	df	21
	Sig.	,017

Total Variance Explained

Com-ponent	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	1,776	25,366	25,366	1,776	25,366	25,366	1,629	23,266	23,266
2	1,150	16,424	41,790	1,150	16,424	41,790	1,292	18,455	41,721
3	1,039	14,847	56,638	1,039	14,847	56,638	1,044	14,917	56,638
4	,951	13,590	70,228						
5	,917	13,094	83,322						
6	,650	9,286	92,608						
7	,517	7,392	100,000						

Extraction Method: Principal Component Analysis.

Rotated Component Matrix[a]

	Component		
	1	2	3
High-quality products	-,049	,887	,024
Satisfactory	,532	,600	-,050
I would definitely buy an iPod, if I needed a new MP3 player.	,686	,145	-,024
I would definitely buy an iPod again, if my current one got lost/stolen or if it was damaged.	,155	-,250	,623
How many hours per day do you use the MP3 player in average?	-,518	-,002	-,190
Group_Aspiration	-,079	,236	,784
Purchase_Influence	,757	-,077	-,047

Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 4 iterations.

Appendix 8: Factor Analysis of Influence by Reference Groups

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		,519
Bartlett's Test of Sphericity	Approx. Chi-Square	324,572
	df	6
	Sig.	,000

Total Variance Explained

Com-ponent	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	1,802	45,038	45,038	1,802	45,038	45,038	1,597	39,916	39,916
2	1,233	30,836	75,874	1,233	30,836	75,874	1,438	35,958	75,874
3	,594	14,843	90,717						
4	,371	9,283	100,000						

Extraction Method: Principal Component Analysis.

Rotated Component Matrix[a]

	Component	
	1	2
Recommendation	,906	-,017
Ownership	,875	,187
Affiliation	,084	,842
Outsiders	,065	,833

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 3 iterations.

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