Lighting the Lotus

Investigating the influence of brand knowledge and corporate image on the buying behavior of consumers on the Vietnamese lighting market

Master Thesis for Communication Science

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Management summary

Background and goal

This report describes the assignment that was executed at the Lighting Division of Philips Electronics Vietnam Ltd. (PEV) in the period of September 2007 until February 2008 as a graduation project for two master studies: Business Administration (BA) and Communication Science (CS). The assignment focuses on the consumer market of PEV. At the moment PEV is the third player in the Vietnamese consumer lighting market with a market share of about 10%, after the two leading brands: Dien Quang and Rang Dong. PEV wants to change this and strives to become market leader in the Vietnamese consumer lighting market by the end of 2010.

This report focuses on the assignment for CS. The goal of this study was to investigate the influence of brand knowledge and corporate image on the buying behavior of consumers on the Vietnamese lighting market. The research question of this assignment therefore is: 'How do brand knowledge and the corporate image of Philips predict the buying behavior of consumers in the Vietnamese lighting market?'

Method

Two studies have been performed: a preliminary study, consisting of interviews with retailers of Philips products, and the main study, consisting of questionnaires with Vietnamese consumers from Ho Chi Minh City (HCMC) and Hanoi: the end-users of lighting products.

Results and conclusions on the separate subjects

Two things can be concluded:

- There is a positive relationship between all the constructs (brand awareness, brand image, corporate image, sustainability, service quality and buying intentions). The strongest correlation is between the constructs of corporate image and brand image, and between corporate image and sustainability.
- No differences were found between different segments in the Vietnamese market (based on age, gender and income groups) on the grades given to Philips products, sustainability as performed by Philips, the corporate image of Philips, and buying intentions for Philips products.

Overall Philips is the best known brand. However, looking at HCMC and Hanoi separately, this is no longer the case: in HCMC Dien Quang is best known, and in Hanoi Rang Dong is best known. In both cities Philips is the second best known brand.

Philips has a good brand image with a mean score of 4.0 on a scale from 1 to 5. Every characteristic of Philips lamps scores positive. The strongest attributes are energy use and durability; the weakest point is price, although this still scores above average. The mean grade given to Philips lighting products is 7.7 on a scale from 1 to 10.

Corporate responsibility (also called sustainability) as performed by PEV is valued positive with a mean score of 3.7, and a grade of 7.2. However, it must be noted that many respondents did not answer the questions on corporate responsibility (in some cases only 30%), which might mean that in general the respondents do not know much about the corporate responsible behavior of PEV.

The corporate image of PEV is also valued positive with a mean score of 3.8 on the corporate image construct, and a grade of 6.9. Philips global is graded somewhat higher by the respondents with 7.5 as the mean grade.

The service quality of PEV is again valued positive with a mean score of 3.8 and a grade of 7.1. This means that service quality is also regarded positive, but not really high.

The results of the study have finally been used to answer the main research question: the influence of the separate constructs on the buying behavior of Vietnamese consumers. The results show that there is:

- A small positive influence of brand knowledge on consumer buying behavior.
- A large positive influence of sustainability on the corporate image and a small positive influence of sustainability directly on the consumer buying behavior.
- A large positive influence of the service quality on the corporate image.
- A small positive influence of corporate image on the consumer buying behavior.

Recommendations

Based on these conclusions some recommendations have been given:

Brand knowledge
The brand knowledge of Philips should be improved in both HCMC as Hanoi, and then mainly the brand awareness. Some methods to achieve this are recommended:

- Internet: create a Vietnamese Philips lighting website with information on Philips lighting products, and interactive possibilities (e.g. a forum, possibility to ask questions and a complaint form). Also internet marketing can be used, for example by advertising on popular Vietnamese websites.
- Promotional material at retailers: brochures on Philips products and flyers on promotional activities to inform customers on Philips lighting products and current marketing activities. In this an active role of the retailers is required in giving the information to the consumers.
- Billboards and shop fronts with advertising for Philips lighting.

Sustainability
The sustainable behavior of PEV should be communicated to the consumers, in order to improve the corporate image of PEV. This can be done by use of a website and promotional material. Stakeholder dialogue is important: interactive communication with the consumers, which can be achieved by the interactive possibilities of the internet as described above.

Corporate image
The corporate image of PEV should be improved. This can be done by improving the sustainability as performed by PEV as mentioned in the previous recommendation, but also by improving the service quality, as decribed below.

Service quality
The service quality of PEV towards both customers as retailers should be improved on two points.

Service towards customers: simplify the process of returning defective lamps: customers have to get a new lamp directly instead of having to wait for the retailer to reclaim the lamp at PEV.

Service towards retailers: simplify the current process with complicated forms that retailers have to fill in for getting warranty on defective lamps.

Further research

Besides these recommendations, it is recommended to perform more research on the following subjects:

- Corporate identity and corporate reputation of PEV (besides the corporate image).
- Other factors that might influence the buying behavior of Vietnamese consumers, for example the influence of price and influence of friends and family, since the factors examined in this study only influence the buying behavior of Vietnamese consumers for a small part.
- Extension of this study to other cities and the rural parts of Vietnam in order to get more representative results for the whole of Vietnam.

Preface

When I started searching for an assignment to finish my master studies, at first I had no idea where to look for a suitable assignment. Should it be in the Netherlands, in Europa, or another continent? Well, the master is called ‘International Management’, so let’s look abroad. Asia maybe? Sounds fun! But then, what assignment: should it be consumer psychologoy, strategy, marketing, process management or something else? Lots of choices, lots of possibilities. But then an opportunity opened up at Philips in Vietnam. Vietnam, the country of conical hats and spring rolls. Vietnam, the country of green rice fields and bays with limestone rocks rising up from the deep blue waters. But most of all: Vietnam, the country I was going to live for six months to finish my study.

Philips Electronics Vietnam was the company I was going to graduate: a marketing assignment, with the objective to make Philips the market leader in Vietnam in the field of consumer lighting. A challenging task, which would require a lot of effort and work, but (hopefully) also a good time and a great experience at a Vietnamese company (though from Dutch origin).

Now, almost a year later, I can only say that it really hás been a great experience. Not only have I had a really good time at PEV, but I also really enjoyed my time in Vietnam: a great country which delivered everything the Lonely Planet promised me and more, and where I’ve made new friends from all over the world.

However, this great time and wonderful experience would not have been possible without the help of a lot of people. I would like to use this preface to thank these people. First of all, the people at PEV. Without them it would not have been possible to do my assignment in the first place, but everybody at PEV has also been really helpful and friendly, not only in completing my assignment, but also by taking me out to small restaurants no Western man will ever come, showing me around the city, taking me to the night clubs and introducing me to real Vietnamese dishes.

Second, I would like to thank my tutors at the University of Twente. Mirjam and Sirp, and in a later stadium prof. de Bruijn: thank you for assisting me in my assignment. You all have been of great help, even at the great distance between Vietnam and the Netherlands you were still able to help me out when I had difficulties, and I really enjoyed having you as my tutors.

Third, a thank you to all my friends in Holland and everywhere else. Although I really enjoyed myself in Vietnam, I was still a long way from home in a country with a different culture and different habits: it has been really great to hear from you from time to time and support me where possible, even if that meant waking me up in the middle of the night by calling me, just because you were having a beer in Amsterdam and wanted to let me know I was really missing out on a great party. Doesn’t matter guys, I’ve had the best parties in Vietnam as well!

And last but not least: my parents, who have supported me all the way. Without you it would not have been possible to study for such a long time in the first place, but it would most definitely not have been possible to go to Vietnam and have such a great time. Thank you for everything!

Martijn Pruijsen
Enschede, June 2008

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Table of abbreviations

Below the abbreviations used in this report are outlined.

Table A - Abbreviations

Abbreviation	***Outline***
BA	Business Administration
CFL	Compact Fluorescent Lamp
CRQ	Corporate Reputation Quotient (Harris & Fombrun, 2000)
CS	Communication Science
HCMC	Ho Chi Minh City
OEM	Original Equipment Manufacturing
PEV	Philips Electronics Vietnam Ltd.
PEU-R	Professional End User & Replacement
TLD	Tubular Lamp Dun (tube lamp)
TR	Trade Retail
TP	Trade Professional

1. Introduction

This report describes the assignment that was executed at the Lighting Division of Philips Electronics Vietnam Ltd. (PEV) in the period of September 2007 until February 2008. This assignment was executed as a graduation project for two master studies: Business Administration (BA) and Communication Science (CS). The present report describes the CS-part of the assignment, and will from now on be called the CS-report. For the BA-study another report has been written: that report will from now on be called the BA-report (Pruijsen, 2008).

This chapter starts with a description of the background of the company and a description of the assignment (section 1.1), followed by the approach towards the assignment (section 1.2) and the objectives derived from this background and the approach (section 1.3). Finally, the main problem formulations and research questions that have been derived from these objectives are given (section 1.4 and 1.5).

1.1 Background

Philips was founded in 1891 in Eindhoven, the Netherlands by the brothers Anton and Gerard Philips. It began by making carbo-filament lamps, and by the turn of the century was one of the largest producers in Europe. Philips has been growing ever since, and nowadays called Royal Philips N.V., it is one of the largest companies in producing electronics products in the world. Philips nowadays is a $30 billion dollar company, which has more than 160.000 employees in over 60 countries worldwide, and with sales and services in 150 countries. In lighting Philips is the number 1 player in the world.

At the moment this study started Philips was divided into five divisions: Consumer Electronics, Lighting, Medical Systems, Semiconductors and Domestic appliances and personal care. However, since the start of the study the Semiconductors division has been sold, and from January 2008 on Philips is divided in three divisions only: Consumer Products, Medical, and Lighting.

1.1.1 Philips Electronics Vietnam Ltd.

In 1993 Philips opened a representative office in Vietnam of the regional distribution center (located in Singapore) to import Philips lamps to Vietnam. However, this had limitations: the Vietnamese law only allowed Philips to import to local distributors, which made it difficult to expand the business.

In order to expand, Philips had to invest in a production facility. Therefore in 2002 Philips opened a new plant near Ho Chi Minh City (HCMC) to assemble fluorescent tube lamps (TLD) and compact lamps (CFL) for the Vietnamese market. The parts needed for the assembly are imported from Philips factories in other countries, for example Indonesia and China.

The Lighting Division of PEV in HCMC is divided into two parts: the factory and the commercial center. This assignment took place at the commercial center, and focuses mainly on this part of PEV. The commercial center drives four sales channels: Trade Retail (TR), Trade Professional (TP), Original Equipment Manufacturing (OEM), and Professional End User & Replacement (PEU-R). Figure 1.1

presents an overview of the place of the commercial center, the four sales channels and on what type of customers the sales channels are mainly focused. The grey boxes are the most important parts of PEV for this assignment.

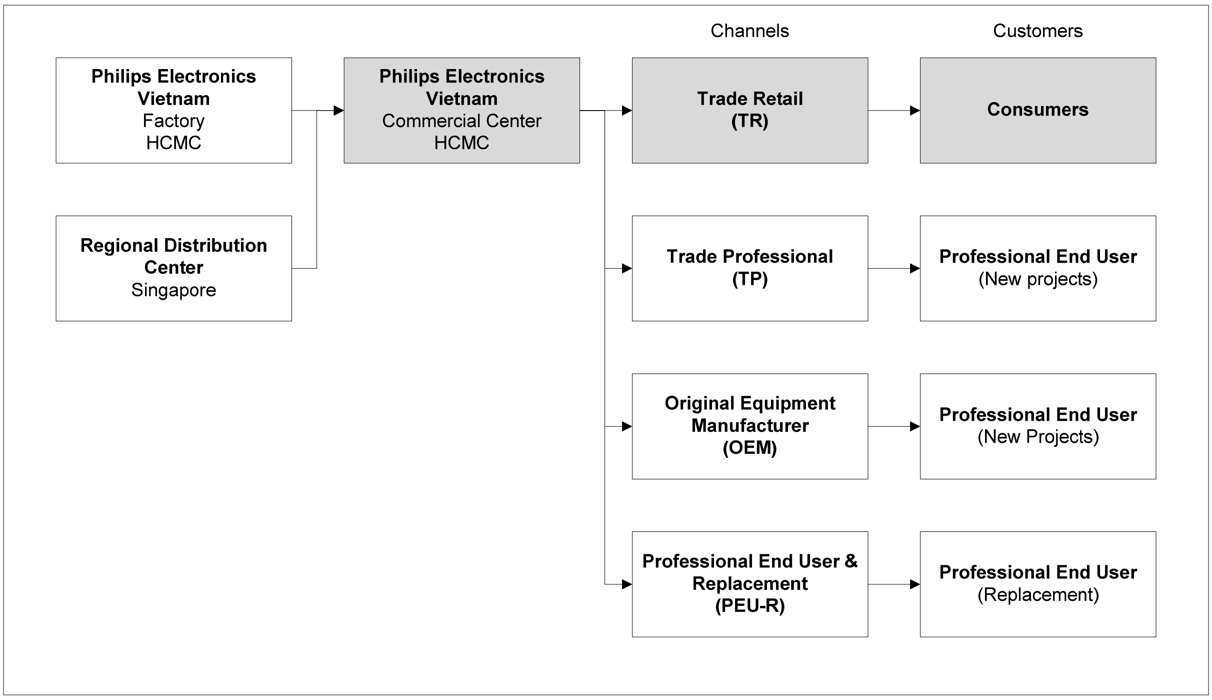

Figure 1.1 – The place of PEV and the commercial center

The entire structure of the Lighting Division of PEV is elaborated in the BA-report.

A note must be made on the usage of the abbreviation PEV in this report. PEV is short for Philips Electronics Vietnam, which also includes other Vietnamese Philips divisions, for example Consumer Products. However, since this assignment focuses on the Lighting Division of PEV only, from now on in this report the use of the abbreviation PEV refers to the Lighting Division of PEV only, and not to any other Vietnamese Philips divisions.

1.1.2 The assignment

At the moment PEV is the third player in the Vietnamese consumer lighting market with a market share of only about 10%, after the two leading brands: Dien Quang and Rang Dong. PEV wants to change this: it wants to become the market leader in the Vietnamese lighting market by the end of 2010.

This assignment focuses on achieving this in the TR-channel, which is concerned with the consumer lighting. The goal of the assignment as given by PEV is that Philips wants to become the no. 1 brand in Vietnamese household lighting by the end of 2010. Or, in other words, Philips wants to become market leader in the Vietnamese consumer lighting market by the end of 2010. The objectives for this assignment that have been derived from this goal are described in the next section.

1.2 Objectives

As described in section 1.1.2, Philips strives to become market leader in the Vietnamese consumer lighting market by the end of 2010. Therefore the objective of this graduation assignment from the viewpoint of PEV can be described as: *to develop a marketing strategy for the consumer market of Philips Electronics Vietnam Ltd., in order to become the no.1 brand in Vietnamese household lighting by the end of 2010.* The development of a marketing strategy can be described as the assignment from the viewpoint of BA, and will therefore be further elaborated in the BA-report.

Since the assignment given by PEV focuses on becoming market leader in the consumer lighting market, the target is simple: Vietnamese consumers will have to buy Philips' products. An important question is: what influences Vietnamese consumers in their buying process? The CS-part of the study focuses on this question. More specific, the influence of two subjects on this buying process has been researched: the brand knowledge of Philips' products with Vietnamese consumers, and the corporate image of Philips as a company.

Therefore the objective of the CS-part of the study can be formulated as: *to investigate the influence of brand knowledge and corporate image on the buying behavior of Vietnamese consumers.* This study has lead to information that has been used for developing the marketing strategy: the results of the CS-study have been used as input for the BA-study. For the CS-study two subjects have been added to the objective: the influence of service quality and corporate responsibility on the corporate image of PEV.

In order to fulfill both objectives, an existing marketing strategy development model has been used as a basis for both the BA-study as the CS-study. However, since this model is mainly used for the BA-study, it is discussed only in the BA-report, and this report only focuses on the the CS-study.

1.3 Problem formulation

Based on the objectives and research approach a main research question can be formulated:

How do brand knowledge and the corporate image of Philips predict the buying behavior of consumers in the Vietnamese lighting market?

In the next section this research question is elaborated into more detailed questions.

1.4 Research questions

In order to answer the main problem formulation, some research questions have been formulated. These are:

1. How does brand knowledge predict the buying behavior of Vietnamese consumers?

2. How is corporate responsibility as performed by PEV valued by Vietnamese consumers?

3. How does corporate responsibility as performed by PEV influence the buying behavior of Vietnamese consumers on Philips lighting products?

4. What is the current corporate image of Philips and how is this image influenced by corporate responsibility?

5. How does the current corporate image of Philips predict the buying behavior of Vietnamese consumers on Philips lighting products?

6. How is the service quality of PEV valued by Vietnamese consumers, and how does this influence the buying behavior of Vietnamese consumers?

1.5 Report structure

The report started with this introduction in **chapter 1.** Next, the theoretical background is then discussed in **chapter 2.** The report then continues with the methodology and results of the first study in **chapter 4**, and the methodology and results of the second study in **chapter 5**. The conclusions and recommendations are discussed in **chapter 6,** after which in **chapter 7** there is room for discussion and reflection. After chapter 7 the literature list and appendices are given.

The structure of this report is shown in figure 1.2.

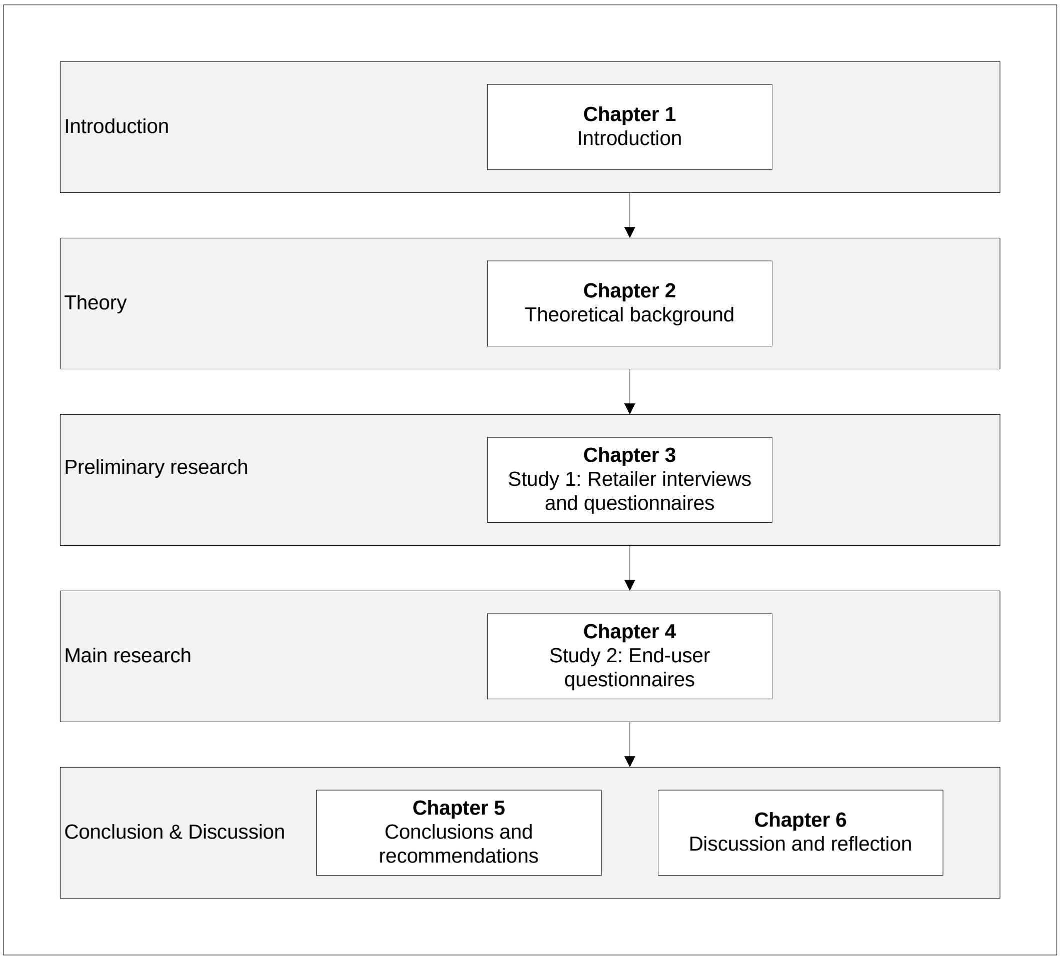

Figure 1.2 – Report structure

2. Theoretical background

In this chapter the models and theories that are used to answer the research questions are discussed. This chapter is divided into the five parts: first, the research approach for BA and CS, followed by the four main subjects of the CS-study: brand knowledge, corporate image, corporate responsibility and service quality.

2.1 Research approach

An overview of the research approach for this study is given in figure 2.1. This shows how the different parts of the CS-study influence each other, and how the BA-study is combined with the CS-study. The CS-part of this combined research model is discussed in this chapter, tha BA-part of the study is discussed in the BA-report.

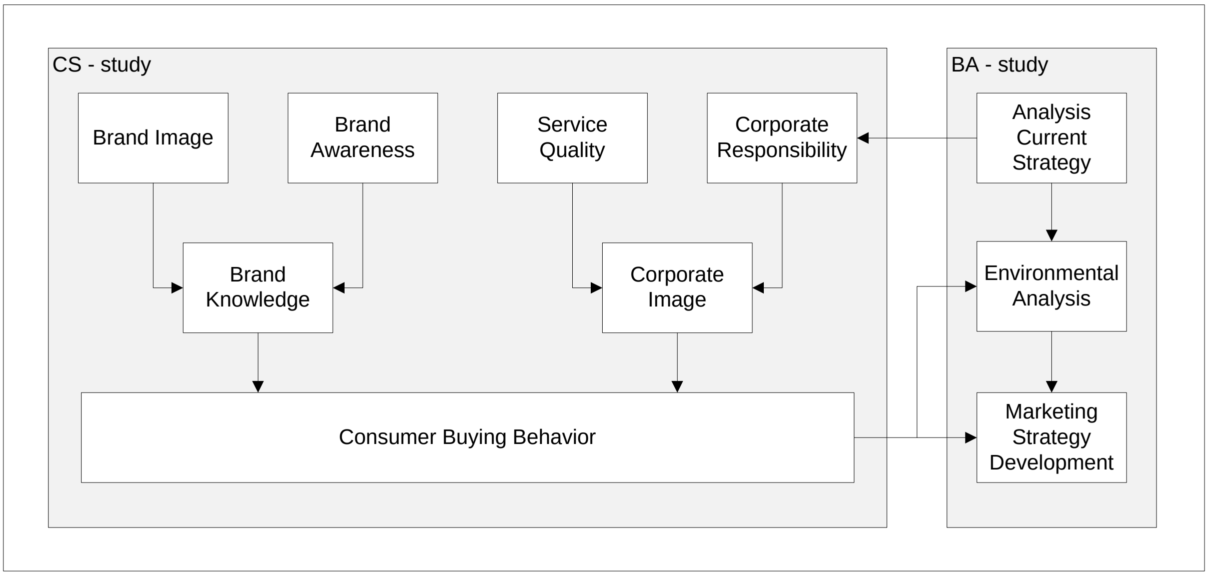

Figure 2.1 – Combined research-model

2.2 Brand knowledge

The research part on brand knowledge is based on the model of Keller (1993), as shown in figure 2.2. In this model brand knowledge is described in two components: brand awareness and brand image. These two subjects are discussed in this section according to the work of some authors who have done research in this field.

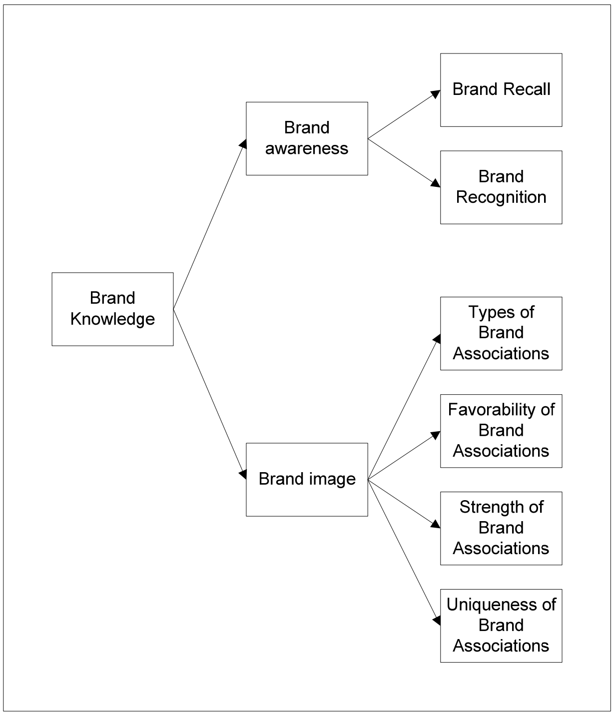

Figure 2.2– Brand knowledge (Keller, 1993)

2.2.1 Brand awareness

Many definitions are given in the literature on what brand awareness is. Some of these definitions are given in table 2.1.

Table 2.1 – Definitions of brand awareness

Authors	***Definition***
Rossiter & Percy (1987, p.113)	The buyer's ability to identify (recognize or recall) the brand, within the category, in sufficient detail to make a purchase.
Keller (1993, p.3)	Brand awareness relates to the likelihood that a brand name will come to mind and the ease with which it does so.
Kapferer (2003, p.59)	Brand awareness measures the number of people who know what the brand stands for and are aware of the promises this sign has given, namely in terms of know-how (which products, which services).
Hoyver & Brown (1990, p.141)	The rudimentary level of brand knowledge involving, at the least, recognition of the brand name.

These definitions show that brand awareness consists of two components: brand recall and brand recognition. According to Rossiter & Percy (1987) and Keller (1993) these two components can be defined as:

- Brand recognition**:** requires that consumers correctly discriminate the brand as having been seen or heard previously.
- Brand recall**:** requires that consumers correctly generate the brand from memory.

Most important for this study is how brand awareness influences the consumer buying behavior. Literature shows that brand awareness can influence this in some ways.

First, brand awareness makes a product candidate for purchase: the choice for a brand can be increased or decreased by manipulating brand awareness (Rossiter & Percy, 1987; Macdonald & Sharp, 2000). Important is the distinction between brand recall and brand recognition: Rossiter and Percy (1987) argue that brand recognition is important *at* the point of purchase, where brand recall is more important *prior to* the point of purchase. Brand recognition is therefore important when for example shopping for a product in a supermarket, which is often the case with fast moving consumer goods like lamps. Rossiter and Percy also argue that one of the characteristics of a strong brand is that it is noticed quickly in brand recognition situations, and recalled quickly in brand recall situations. This can positively influence the choice for this brand.

Related to this is the role brand awareness plays when consumers have to choose between a number of brands. In literature this is called the consideration set of consumers: the set of brands which a consumer gives serious attention to when making a purchase. Literature shows that when consumers have to choose between brands, they tend to choose the brand they know (Hoyer & Brown, 1990; Pitta & Kansanis, 1995; Keller, 1993; Macdonald & Sharp, 2000). This is mainly when it concerns low-involvement products (Keller, 1993; Pitta & Katsanis, 1995), and even when the product is lower in quality than other brands the consumers had the opportunity to sample (Hoyer & Brown, 1990).

A third point is the formation of brand associations and brand image. A number of authors mention brand awareness as a condition necessary in order to form brand associations and brand image (e.g. Chen & He (2003), Keller (1993) and Pitta & Katsanis (1995)). The importance of brand image is discussed in the next section.

2.2.2 Brand image

Keller uses an associative network memory model of brand image. He defines brand image as ‘perceptions about a brand as reflected by brand associations held in the consumer’s memory’ (Keller, 1993, p.2). Brand associations here are the informational nodes in the consumer’s memory that link to the brand, and contain the meaning of the brand for consumers. As shown in figure 2.1, he distinguishes four aspects of brand associations: types, favorability, strengths and uniqueness of brand associations.

Dobni & Zinkhan (1990) conducted research on brand image and definitions of the concept. In defining brand image they distinguish several characteristics:

- It is the concept of a brand that is held by the consumer
- It is largely a subjective and perceptual phenomenon that is formed through consumer interpretation.
- It is not inherent in the physical, technical or functional concerns of the product. Rather, it is affected and molded by marketing activities, context variables, and characteristics of the perceiver.

- The perception of the reality is more important than the reality itself.

They also come to the conclusion that brand image is of great importance in consumer behavior research.

These descriptions of brand image show that brand image concerns the subjective perception of the brand: the meaning a brand gives to consumers, by the interpretation of the brand by those consumers.

As mentioned before, the formation of brand image is mostly important in consumer decision making when it concerns high involvement products. The assumption is made that this is not the case in this study, since the products of PEV are mainly low-involvement products, in which brand awareness is more important. However, for PEV it is still interesting to see what the brand image of Philips products is among Vietnamese consumers. Therefore this still is researched according to the brand associations mentioned by Keller, in order to see what associations Vietnamese consumers have with a brand and how these are valued by the Vietnamese consumers.

2.3 Corporate image

The second subject in the CS-study is corporate image. In the present study two levels of brand image can be distinguished: the image of the company Philips in general, and PEV in specific. The subject of corporate image is closely related to corporate identity and corporate reputation. In this section these three subjects and their interrelations are discussed.

2.3.1 Corporate identity

Much is written on corporate identity, and scientific literature shows that over the years a number of definitions are given by different authors. Many authors also mention the extensive amount of practitioners' literature, where academic literature is scarce (e.g. Van Rekom, 1997). However, in recent years more attention is given to the scientific notion of corporate identity. In the literature a number of definitions of corporate identity have been found. Some of these definitions are given in table 2.2.

Table 2.2 – Definitions of corporate identity

Authors	***Definition***
Van Rekom (1997, p.410)	What an organization is: the set of meanings by which an object allows itself to be known and through which it allows people to describe, remember and relate to it.
Christensen & Askegaard (2001, p.297)	Corporate identity is a set of symbolic representations, including graphic designs and, sometimes, organizational behavior.
Gray & Balmer (1998, p.697)	The reality and uniqueness of an organization which is integrally related to its external and internal image and reputation through corporate communication.
Van Riel (1994, p.96)	Corporate identity is the self representation of an organization: the offer of cues concerning an organization, shown by behavior, communication and symbolism.

These descriptions of corporate identity show that it is concerned with the internal and external representation of a company. This is shown by several characteristics of the company, of which symbols, communication, behavior are mentioned by all authors described. These three components, together are called the 'corporate identity mix' (Van Riel, 1994; Van Riel & Balmer, 1997). Corporate identity therefore is important for creating corporate image, which is discussed in the next section.

2.3.2 Corporate image

A definition of image in general is given by Dowling (1986, p.110): 'An image is the set of meanings by which an object is known and through which people describe, remember and relate to it. That is, it is the net result of the interaction of a person's beliefs, ideas, feelings and impressions about an object.' This definition is also used by Van Riel (1994) and Van Rekom (1997).

Also for corporate image a number of definitions are found in the literature. These are given in table 2.3.

Table 2.3 – Definitions of corporate image

Authors	***Definition***
Nguyen and LeBlanc (2001, p228)	the overall impression made on the minds of a public about a firm. It is related to the various physical and behavioral attributes of the firm, such as business name, architecture, variety of products/services, tradition, ideology, and to the impression of quality communicated by each person interacting with the firm's clients
Gray & Balmer (1998, p.698)	The immediate mental picture that audiences have of an organization.
Hatch & Schultz (1997, p.358)	The image concept points to the different external images held by various constituencies (e.g. customers and suppliers).

The definitions as described above show that the corporate image concerns the external representation of a company on its publics, or in other words, how the public perceives the company and how it feels about the company.

2.3.3 From corporate identity to corporate image

It is evident from the descriptions of corporate identity and corporate image that there are differences between these two concepts. These differences are described by a number of authors (e.g. Van Rekom (1997), Balmer (1998), and Christensen & Askegaard (2001)). In the study of Christensen and Askegaard a definition of Margulies (1977) is used to describe the distinction between identity and image: ‘Identity means the sum of all the ways a company chooses to identify itself to all its publics: the community, customers, employees, the press, present and potential stockholders, security analysts, and investment bankers. Image, on the other hand, is the perception of the company by these publics.’ In communication terms this means that identity is on the sender’s side, while image is on the receiver’s side.

Many authors agree on the relationship between corporate identity and corporate image. Van Rekom mentions the effect that an organization’s identity can have on its corporate image: ‘In the long term, management can influence the organization’s identity, and, depending on management’s chosen corporate strategy, can realize an improved or repositioned corporate image’ (Van Rekom, 1997, p.411). This is acknowledged by Melewar and Jenkins (2002) in their study on the construct of corporate identity.

Another confirmation of the influence of corporate identity on corporate image is given by Markwick and Fill (1995): ‘Image, therefore, exists in the mind of each stakeholder and cannot be managed directly. Management seeking to influence the images held of their organization can only do so through the management of the corporate identity. By presenting orchestrated cues, images may be repositioned or altered in the minds of the recipients. Corporate image is what stakeholders perceive the organization to be.’

Concluding: the corporate image that exists in the minds of stakeholders (amongst whom are the customers of a company) is largely formed by the corporate identity of an organization, and how this is communicated to the stakeholders.

These authors show that a good image is valuable to a company. Some general advantages, which can be of value for the BA-study, are described by Gray and Balmer (1998). They present a model in which they argue that corporate image can lead to competitive advantage. They see the image and reputation of a company as valuable strategic resources.

Van Riel (1994) also describes several advantages of having a good, strong corporate image as a company. He describes these advantages of companies with a good corporate image:

- Getting an advantage in selling products compared to companies with a lesser image.
- Getting qualified employees.
- Creating confidence in the financial world.
- Having fewer problems with governments, action groups or consumer organizations.

He also mentions the importance of image in the case of consumer buying decisions, which is more of importance for the CS-study:

- When consumers have to make decisions and the information is complex, conflicting and/or incomplete.
- The information is too much or too little to make a judgment.
- Product involvement is low.
- In conditions that complicate the decision process, like time limits.

This shows that for companies there are several advantages in having a a good corporate image. For this assignment especially the arguments mentioned about consumer buying decisions are important: having a good image can influence the buying decisions of consumers in the favor of Philips' products.

2.3.4 Corporate reputation

Literature shows that after the formation of image, there is the formation of corporate reputation. Some definitions and their relationship to corporate image are given below.

Gray and Balmer (1998) describe the relation between corporate image and corporate reputation as: 'corporate image is the immediate mental picture that audiences have of an organization. Corporate reputation, on the other hand, indicates a value judgment of about the companies attributes'.

Nguyen and Leblanc (2001) describe corporate reputation as a result of past actions of the firm. They also state that companies can have multiple reputations for multiple attributes (like price, product quality, management quality), and with multiple stakeholders. Therefore companies can have multiple reputations according to combinations of attributes and stakeholders.

Also some authors discussed differences between corporate image and corporate reputation. Gotsi and Wilson (2002) reviewed some of the literature on corporate reputation and conclude that corporate image and corporate reputation are interrelated. The definition they use is based on an extensive literature study and is therefore used as the definition in this study. This is: 'A corporate reputation is a stakeholder's overall evaluation of a company over time. This evaluation is based on the stakeholder's direct experiences with the company, any other form of communication and symbolism that provides information about the firm's actions and/or a comparison with the actions of other leading rivals.' The relationship to the corporate image and corporate identity is represented in figure 2.3.

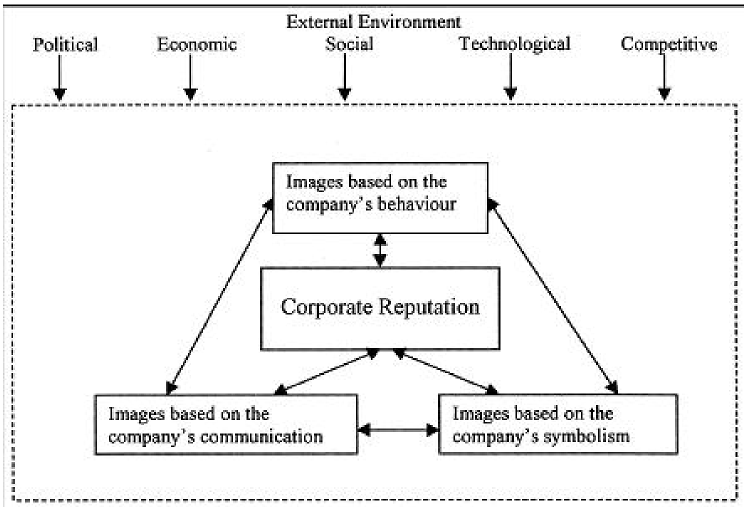

Figure 2.3 – Corporate reputation and relation to corporate images (Gotsi & Wilson, 2002)

Figure 2.3 also shows that the three images that influence corporate reputation correspond with the three elements of the corporate identity mix: behavior, communication and symbolism.

A general conclusion on corporate reputation is that it represents a long term view of the company by its stakeholders, and must be built up over time. This is in contradiction to corporate image, which is a temporary, short-term view of the company by its stakeholders.

2.4 Corporate responsibility

The third subject in the CS-study is corporate responsibility. In this study the term 'corporate responsibility' is used for what in literature is referred to with different terms, for example:

- Corporate social responsibility
- Corporate citizenship
- Corporate environmental performance
- Sustainability
- Sustainable development
- Corporate sustainability

However, the three most commonly used terms are corporate social responsibility, sustainability and corporate citizenship. In this study the focus will be on sustainability. The reason for this is that Philips is already concerned with sustainability, and has a part of their website that discusses the way in which Philips acts concerning sustainability (Philips, 2007).

The importance of corporate responsibility for this study is two-sided: the view from the CS-study, and the view from the BA-study. The importance for the CS-study is the influence that corporate responsibility has on the formation of the corporate image. The importance for the BA-study is more in the field of how sustainability can be of advantage for a company, how this can be used as an input for creating a marketing strategy. In this study only the approach for the CS-study has been used.

Another point for the influence of corporate responsibility on the company and its products is found by Brown and Dacin (1997). In their study they found empirical evidence on the fact that associations that people have on the corporate responsibility of a company influence their evaluation of products of a company, through the influence of corporate responsibility on the corporate evaluation. This is particularly important for this research because it provides a link between three important subjects of the CS-study: corporate social responsible behavior of a company, the corporate image of a company, and the evaluation of the products of a company.

The definition of sustainability used in this study is based on the definition for sustainable development of the World Commission on Environment and Development: 'Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs'. Crane & Matten (2007) use this definition to give their definition of sustainability: 'Sustainability refers to the long-term maintenance of systems according to environmental, economic and social considerations'. The framing of sustainability as a goal for business is encapsulated in the notion of a 'triple bottom line'. The idea behind the triple bottom line is that business does not have one single goal (namely adding economic value), but that is has to add environmental and social value too. This leads to the three components of sustainability: economic, social, and environmental. Kaptein and Van Tulder (2003) also refer to the triple bottom line in their research. They refer to these components as People (social), Planet (environmental) and Profit (economic). These three components are shortly discussed in the next three sections, followed by the role of stakeholder communication in sustainability.

Environmental

The environmental perspective concerns the effective management of physical resources so that they are conserved for the future. All biosystems are regarded as having finite resources and finite capacity. Hence sustainable human activity must operate at a level that does not threaten the health of those systems. Subjects of importance are for example the continued use of non-renewable sources such as oil, steel and coal (Kaptein & Van Tulder, 2003).

Economic

The economic perspective concerns two concepts. The narrow concept concerns the economic performance of the company itself: to develop, produce and market those products that secure the long-term economic performance for the corporation. This for example leads to strategies that focus on long-term profit instead of short-term profit strategies at expense of long-term success.

The broad concept concerns the economic framework in which the company is embedded. This concerns for example the attitude towards buying bribes and building cartels, which undermine the long-term functioning of markets (Kaptein & Van Tulder, 2003).

Social

The social perspective has social justice as a key issue. This concerns for example issues like the inequality in living standards across the globe (Kaptein & Van Tulder, 2003).

Van Marrewijk (2003) also distinguishes corporate social responsibility and corporate sustainability. He argues that in the past these were different concepts, which have grown into convergence. The distinction he makes is that corporate social responsibility is associated with the communion aspect of people and organizations, and corporate sustainability with the agency principle. Therefore corporate social responsibility relates to phenomena such as transparency, stakeholder dialogue and sustainability reporting, while corporate sustainability focuses on value creation, environmental management, environmental friendly production systems, human capital management and so forth. This concept of sustainability is for a large part in line with that of Crane & Matten.

2.4.1 Role of stakeholder communication

As discussed in the section on corporate identity, image and reputation, in these three subjects the stakeholders of a company are of major importance. Therefore in researching the influence of corporate responsibility on the corporate image it is important to research how the company communicates their activities on corporate responsibility with their stakeholders, and what influence this has on the corporate image.

A research conducted by Clarkson (1995) focuses on the stakeholder approach of corporate responsibility. He defines stakeholders as: ‘Persons or groups that have, or claim, ownership rights, or interests in a corporation and its activities, past, present, or future’. This research is focused on what Clarkson describes as primary stakeholders, without whose continuing participation the corporation cannot survive as a going concern. Customers, the focus of this study, are part of the primary stakeholders.

Kaptein and Van Tulder (2003) argue for stakeholder dialogue. They argue that it is import to increase stakeholder trust in a company, and that this can be done by involving stakeholders in the dilemmas a company is dealing with. This is called stakeholder dialogue: informing stakeholders as well as communicating with them. Stakeholder dialogue is a structured interactive and proactive process, aimed at creating sustainable strategies. This can enhance the company’s sensitivity to its environment, as well as increase the environment’s understanding of the dilemmas facing the organization. Another use of stakeholder dialogue is the development of key performance indicators (KPI’s).

The important role of stakeholder communication is also discussed by Duncan and Moriarty (1998), who argue that understanding the role of communication in establishing and maintaining profitable stakeholder relationships is essential. In their communication-based marketing model for managing relationships they argue that companies should interactively communicate with their customers in their marketing activities.

For this study there are two important groups of stakeholders: the customers and the retailers of Philips products. Both are of importance for the business of PEV, and for both customers and retailers the role of stakeholder communication is of interest for this study.

2.5 Service quality

Finally, the concept of service quality is discussed. Literature on this subject shows that service quality and how it is perceived by the customers can be important in influencing behavioral intentions of customers (Zeithaml, Berry & Parasuraman, 1996; Bolton & Drew, 1991). This is confirmed by Cronin and Taylor (1992), who argue that service quality is an antecedent of consumer satisfaction, and that consumer satisfaction has a significant effect on purchase intentions. It is therefore interesting to research how the service quality of PEV is perceived by the customers and how this influences the image of PEV and the consumer buying behavior.

However, the focus is not only on customers. The service quality of PEV towards the retailers is also an important subject, since these are also important stakeholders of PEV. Therefore in this study the focus is on both service towards the customers as towards the retailers.

Parasuraman, Zeithaml and Berry (1988) propose the SERVQUAL instrument for assessing customer perceptions of service quality. This instrument was later refined (Parasuraman, Berry & Zeithaml, 1991) and consists of five dimensions (Parasuraman, Zeithaml and Berry, 1988, p.23):

- Tangibles: the physical facilities, equipment, and appearance of personnel.
- Reliability: the ability to perform the promised service dependably and accurately.
- Responsiveness: the willingness to help customers and provide prompt service.
- Assurance: the knowledge and courtesy of employees and their ability to inspire trust and confidence.
- Empathy: caring, individualized attention the firm provides its customers.

This instrument has been used in this study to measure the service quality of PEV. How this is done, is discussed in chapter 6.

2.6 Conclusion

In this chapter the theoretical background on the three main subjects of the CS-study has been treated. When looking at brand knowledge, the literature shows that mainly brand awareness is important for low-involvement products, as is the case in this assignment. However, brand image might also be important, so both brand awareness as brand image will be researched. When looking at corporate identity, corporate image and corporate reputation, the main point of interest for this study is corporate image. Finally, when looking at corporate responsibility (in this case sustainability), literature shows that this can be divided into three parts: environmental, economic and social. This has been researched with a focus on stakeholder communication.

In figure 2.4 is shown how the different elements described in this chapter are taken together in the research model, based on the research model described in chapter 2.

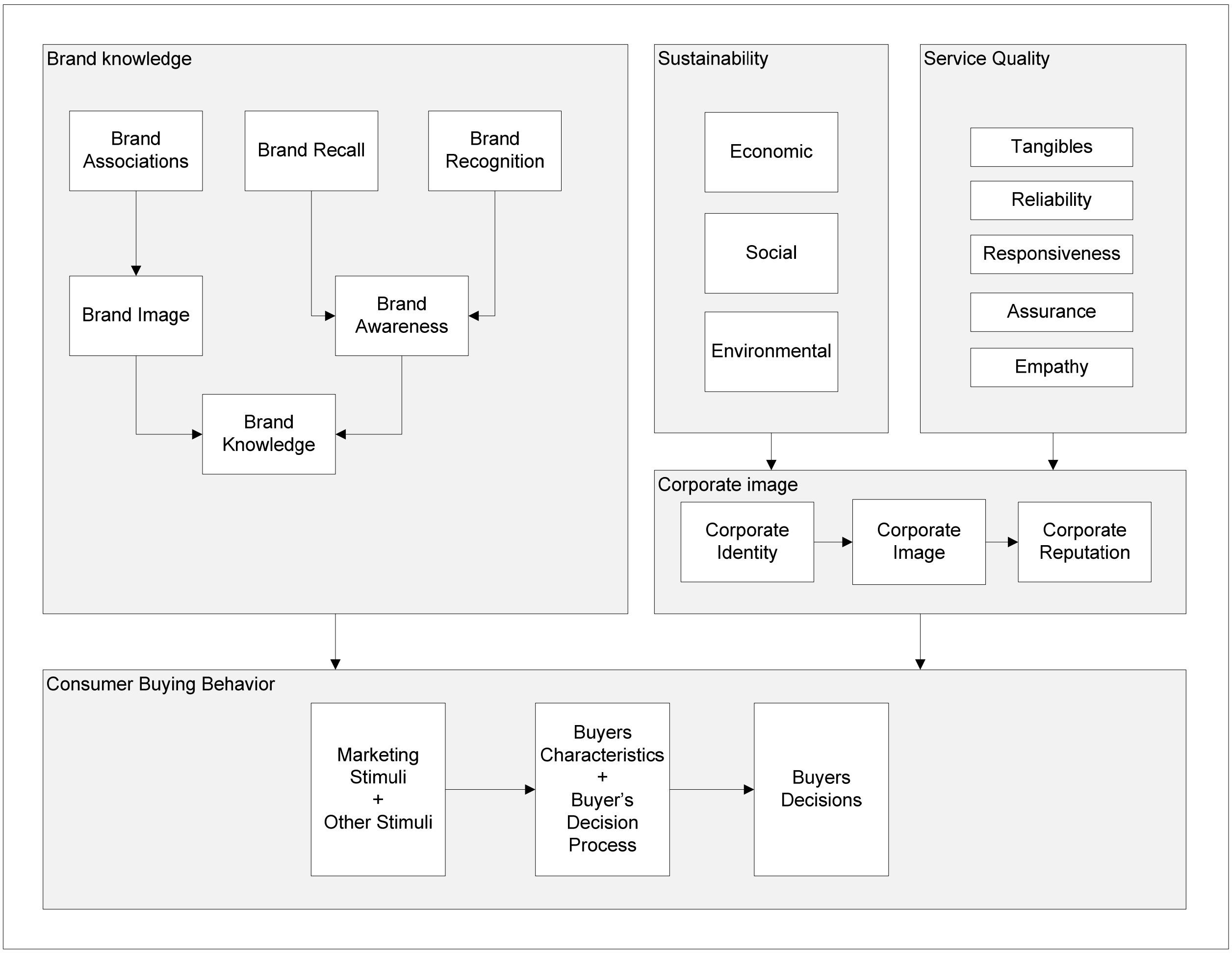

Figure 2.4 – Research model

In the next chapters is discussed how the literature has been used to construct a measurement instrument for the preliminary and the main research, and how this research has been executed. Chapter 3 starts with the methodology and results of the first study: the retailer questionnaires and interviews.

3. Study 1: retailer interviews and questionnaires

This chapter presents the methodology and results of the first study. This preliminary research consists of two parts: questionnaires and interviews, both conducted amongst respondents in HCMC.

The retailer interviews and questionnaires were intended to identify the factors that are important in predicting the buying behavior of consumers according to the retailers themselves, and to discuss the factors found in the literature with the retailers to identify which of these factors are considered most important. The goal of this study was to identify these factors, in order to create the instrument for the second study: the end-user questionnaires.

3.1 Literature

For this study it is important to measure the brand awareness of Philips' products with Vietnamese consumers. In literature not much is found on the measurement of brand awareness. Laurent et al. (1995) have performed a research on the measurement of brand awareness. They distinguish three types of brand awareness, which are confirmed by Kapferer (2003):

- **Top of mind (TOM)** awareness: measures whether the brand is the first to come to the mind of people who are interviewed on the brands of a given product category.
- **Unaided** (Kapferer) or **spontaneous** (Laurent et al.) awareness: measures the brand's impact, i.e. to what extent it is spontaneously associated with a given product category.
- **Aided** awareness: consists in asking the target-audience if they have heard of certain brands, or if they have at least heard their names.

For this study a distinction was made between brand recall and brand recognition. Brand recall is measured by TOM and spontaneous awareness; brand recognition is measured by aided awareness.

On the measurement of brand image not much is found in literature. Dobni and Zinkhan (1990) mention some approaches that can be used, either by quantitative or qualitative methods. These are:

- Identification of important attributes
- Creation of a measurement instrument
- Calculation of brand score

In this study the brand image has been measured by the first and third method. First, in the interviews with retailers, a number of brand attributes (or characteristics of the brand) have been identified. These have been measured in the end-user questionnaire, thus calculating the brand score.

Also not much was found in the literature specifically on the measurement of corporate image itself. However, corporate image is closely related to corporate reputation. Therefore some measurement instruments on corporate reputation have been used to measure corporate image. The two instruments used for this study are the Corporate Reputation Quotient (CRQ) (Harris & Fombrun, 2000) and the measurement categories by Schwaiger (2004).

The CRQ is a corporate reputation measurement method that was developed to capture the perceptions of any corporate stakeholder group such as consumers, investors of employees. In this case the consumers are the most important stakeholders. The model has six drivers of corporate reputation:

- Emotional appeal
- Products and services
- Vision and leadership
- Workplace environment
- Financial performance
- Social responsibility

In appendix 1a a complete overview is given of the original CRQ and the items in the six categories.

In measuring corporate reputation Schwaiger (2004) identifies a list of categories that are used in reputation measurement, as shown in appendix 1b. These categories are for a large part the same as mentioned in the CRQ. For this study a combination has been made of the factors in the CRQ and the factors mentioned by Schwaiger.

The subjects as discussed in this section have been used to construct the retailer interviews, retailer questionnaires and the end-user questionnaires. This chapter now continues with the description of the respondents of the retailer interviews and retailer questionnaires.

3.2 Respondents

The questionnaires and interviews used for the preliminary research have been conducted amongst the distributors, wholesalers and retailers of Philips products in HCMC. One distributor has been interviewed; the rest of the interviews has been held amongst storekeepers that were both wholesaler and retailer at the same time. The reason for this is twofold. First, storekeepers that are both retailer and wholesaler know both the business from the viewpoint of a wholesaler and from the viewpoint of a retailer. Second, they have a product portfolio of both Philips products and products of the competitors. Since the results from the interviews with the distributors and the retailers/wholesalers were very similar, they are taken together. From now on to this group of respondents will be referred to as ‘retailers’. In total 11 respondents have been interviewed.

3.3 Interview design

First, an interview has been held with a number of retailers. The interview was semi-structured, which means that a number of questions were formulated in advance, and when necessary (for example if more explanation was required) more questions could be asked. The interview consisted of three parts:

Introduction

In the introduction to the interview was explained who the researchers were, and what the reason for the interview was. Second, the procedure of the interview and the questionnaire was explained and an indication was given of how long the interview would take (an indication of about 30 minutes was given). When the retailer agreed in having an interview, the actual interview started.

Questions

There were five main questions that were asked, which consisted of the following subjects:

- The strong and weak points of Philips and its products
- The current market position of Philips compared to the competitors
- The strong and weak points of the competitors of Philips and their products
- The current and future strategies of the competitors of Philips
- What points Philips should improve

Ending

After the questions the interview was ended by asking the retailer if he or she had anything to add to the answers given, and the research continued with the retailer questionnaires.

3.4 Questionnaire design

A questionnaire has been made for the second part of the preliminary research. This questionnaire consists of three parts, which are described below. The entire questionnaire can be found in appendix 2. The third part of the questionnaire was intended for the BA-study and is therefore not discussed here.

3.4.1 Part 1: open and closed questions

In the first part some open questions were asked, with a few closed questions added to this. The goal of these questions was:

- To find out which brands of lamps the respondent thought of;
- What the respondent thought were important factors in the formation of the image of
    - The brand Philips in general;
    - Philips lamps;
    - And the corporate image of Philips Lighting Vietnam.
- What factors the respondents thought play a role in the corporate responsible behavior of a company, and how large that effect is on consumer buying behavior.

The answers to these questions have been used for creating the items in the questionnaires of the main research. This is discussed in the next chapter.

3.4.2 Part 2: confirmation of literature

The second part of the interviews was aimed at the confirmation of factors found in the literature. These were factors concerning the three subjects of the CS-study: brand knowledge, corporate image and corporate responsibility. Respondents were asked to respond on a 5-point Likert schale (‘not at all’ to ‘very much’) how much they thought these factors would influence the buying decision process of Vietnamese consumers. Examples of these items are ‘price’ or ‘energy use’.

Also the potential influence of the factors of the CRQ of Harris and Fombrun on consumer buying behavior were checked in this part of the interviews: for this the respondents were also asked to respond on a 5-point Likert schale (‘not at all’ to ‘very much’) how much they thought these factors would influence the consumer buying process. Example of these items are ‘development of innovative services’ and ‘leadership in the company’. Besides these items also some other potential factors were checked. These factors were derived from data available at PEV (in which the most important source was the graduation assignment of Casper Arnolds, executed at PEV in 2005) and some factors from discussion with the managers at PEV. An example is the factor that Philips is a foreign company.

3.5 Pilot study

Before conducting the actual preliminary research, a short pilot study has been performed on the questionnaires. For this three employees of Philips have been asked to fill out the questionnaire (the English version), and tell what problems they saw in the questions. The employees have been watched while filling in the interviewers, and the problems these employees had were noted. This lead to some small changes in the formulation of some questions, in order to make them more understandable. After these changes had been made, the questionnaire has been translated to Vietnamese. After the translation, the third step in the pilot study was to let some retailers fill out the questionnaire. This showed that still some questions were too difficult to understand for the retailers, so again some questions have been rephrased and some other questions have been deleted. This resulted in the final questionnaire as shown in appendix 3a.

3.6 Procedure

In the last week of October and the first week of November of 2007, a total of eleven retailers/wholesalers have been visited to conduct the final questionnaires. All retailers were located in HCMC. For this the researcher and an employee of PEV (the sales representative for the retail channel in HCMC) have visited the stores of the respondents. The respondents did not know beforehand that they were being visited for the study. Once the researcher and the PEV employee reached the store, the employee explained the reason for the visit to the respondent. Each respondent visited had no objections in cooperating in the research. After explaining the reason for the research, first an interview was being held with the respondent, according to the interview schedule as described before.

After the interview was completed, the respondent was asked to fill in the questionnaire. The employee of PEV assisted the respondent when he or she did not understand the questions by explaining what was meant with the questions. After completing the questionnaire the respondent was thanked for his cooperation in the research.

After conducting all 11 questionnaires, the answers to the questions were translated from Vietnamese into English by an employee of Philips, and then analyzed. The results from this analysis are discussed in the next sections of this chapter.

These results are split up in the four subjects of the CS-study: brand knowledge, corporate image, corporate responsibility and service quality. This chapter is concluded by discussing what results of the preliminary research have been used for the second study: the main research.

3.7 Brand knowledge

Brand knowledge is, based on the literature, split up in the results on brand awareness and brand image.

3.7.1 Brand awareness

The results on the brand awareness of Philips and its competitors amongst the retailers are shown in table 3.1.

Table 3.1 – Brand awareness amongst retailers

Mentioned	***Number of times mentioned***	***Percentage***
First		
Philips	6	54,4%
Dien Quang	4	36,4%
Paragon	1	9,1%
Second		
Dien Quang	4	36,4%
Rang Dong	3	27,3%
Philips, Paragon, Duhal, Osram	1	9,1% (per brand)
Third		
Philips	4	36,4%
Rang Dong	2	18,2%
Duhal, Osram, Megaman, Toshiba	1	9,1% (per brand)

According to the figures shown in table 3.1, Philips is the TOM-brand, followed by Dien Quang and Rang Dong. Based on the brands mentioned second and third, the next best known brands are Dien Quang and Rang Dong. It must be noted, however, that the retailers knew that the research was conducted by Philips, so this will have influenced the results by causing them to mention Philips first.

The second point in brand awareness is how important the retailers thought the two components of brand awareness are in the buying decision of consumers. They indicated this on a 5 point Likert scale, ranging from 'not at all' to 'very important'. The average score on this was both for brand recall as for brand recognition 4,0 (n=10), which means that on average the retailers think that both brand recall as brand recognition are pretty important on the buying decision of consumers.

Two extra questions here were whether the retailers knew what the Philips logo looked like, and whether they could mention the Philips slogan. 10 out of 11 retailers answered they knew exactly what the logo looked like, so this is well known. Surprisingly, however, none of the retailers could correctly recall the general Philips slogan ('Sense and Simplicity'). Two retailers mentioned the lighting slogan (which is 'Longer life, more energy-saving').

3.7.2 Brand image

The second part of brand knowledge is brand image. This has been measured by asking the retailers what their first thoughts when they thought of Philips; and as a second point by asking them to describe the two brand images they had of Philips: the brand Philips in general, and the brand Philips in lighting products.

The first thoughts on Philips showed that there were three things mentioned several times: Philips as a brand of high-quality products, as an energy-saving brand, and as a famous foreign brand.

In asking the retailers on the two images, mixed results came forward. The first image (the general image of Philips) showed no common results: a number of retailers did not answer the questions and left it open; and for the retailers that did answer the question no answer was given more than once. Considering the second image (the brand Philips in lighting), somewhat more consistent answers were given. This came in general down to three points: good quality, energy-saving, and good value for the money. This last point is confirmed by another question asked in the questionnaire (in which the retailers were asked whether they think the price of Philips lamps is too high, good or too low): 7 out of 10 retailers answered they thought the price was good; the average score on this question was 2,6 (N=10) on a scale from 1 to 5. This indicates that on average the retailers think the price is a little high (since a mean score of 3 would mean the price is exactly right considering the retailers), but still quite good.

A second point in brand image is the importance of brand image on the buying decision of consumers, according to the retailers. This has been measured by asking the retailers to fill in how important they thought several factors that can determine the brand image were. The results are shown in table 3.2, in order of importance (based on the mean score).

Table 3.2 – Importance of brand image factors according to retailers (n = 11)

Factor	***M***	***SD***
Quality	4.6	.51
Durability	4.6	.51
Warranty	4.4	.67
Energy use	4.3	.79
Price	4.2	.87
Design	3.8	.75
Foreign brand	3.7	1.0
Packaging	3.6	.81

The results from table 3.2 show that according to the retailers, mainly quality and durability are important factors influencing buying decisions, followed by warranty, energy use and price. Design, foreign brand and packaging are still above average, but score under 4.

Concluding, some things can be said about brand knowledge. First, considering brand awareness, it can be said that Philips is on general well known amongst the retailers (which is not at all surprising, since they sell Philips products), brand awareness is high, and that according to these retailers both brand recall as brand recognition are important in the buying decision of consumers. Second, concerning the brand image, on general the results show that amongst the retailers Philips is known as a high-quality, energy-saving brand. A third point mentioned in the image is the price: although it is quite high, the retailers think it is a good price for the money. Most important in the buying decision of consumers are quality and durability, according to the retailers.

3.8 Corporate image

The second part of the results of the questionnaires deals with the importance of corporate image on the consumer buying decision according to the retailers, and a confirmation of the factors of Fombrun's CRQ (with some factors added to this).

First, the retailers were asked to indicate how important they thought corporate image in general was on the buying decision of consumers. This showed a slightly positive result, with a mean score of 3.6 (N=11, SD=1.1).

A second point is the confirmation of the factors of Fombrun's RQ. For this the retailers were asked to fill in on a 5-point Likert scale how important they thought the different items of Fombrun's instrument were on the buying decision of consumers. The results showed that every single item scored positive: the average on single items varied from 3.4 to 4.4, in which most items scored between 3.6 and 4.0. The highest scoring items were quality of products (M=4.0, N=10), prospects for future growth (M=4.0, N=8), outperform competitors (M=4.1, N=8) and treatment of people (M=4.4, N=8).

3.9 Corporate responsibility

As a third point the retailers were asked to indicate what they thought were important factors for a company in acting responsibly in general. They were not asked to indicate factors for each of the three parts of corporate responsibility separately (economic, social and environmental), in order to find out what they thought of themselves, and not give directions in this. As a second point the retailers were asked to indicate how important they thought corporate responsible behavior was on the buying decision of consumers.

The results from the first question ('What do you think is important for a company to act responsibly in general?') showed that the retailers thought of all three the parts of corporate responsibility. For the economic part, the factors of high quality, benefit for distributors and retailers, good after-sales service and a good price were mentioned. For the social part, the factors of social behavior in general, and attention to the community were mentioned. For the environmental part, the factors of energy-saving, not polluting the environment and the environment in general were mentioned. All of these factors, although sometimes named slightly different, were mentioned several times. Most mentioned were environment in general, and the price of the products.

3.10 Service quality

The last point in the retailer questionnaires dealt with service quality. This is considered an important point by the retailers, and is seen in two ways: the service quality of PEV towards the retailers, and the service quality of PEV towards the consumers.

Some retailers mentioned that they think the service quality of Philips is not good enough, both towards the retailers as towards the end-users. The problem most mentioned was the complicated warranty regulation that Philips uses: retailers have to fill in a form for reclaiming defective lamps in the warranty period, and send this form to PEV. This is a time consuming process which causes retailers much work, and because of this consumers also have to wait before they get a new lamp for the defective one.

It has been decided that in the end-user questionnaire some questions on service quality should be asked, to find out how the end-users perceive the service quality of Philips. For this the SERVQUAL measurement instrument by Parasuraman, Zeithaml & Berry (1988) has been used, in an adapted form. How this has been done is further explained in the next chapter.

3.11 Conclusion

As a conclusion for the first study is described which of the results from this study have been used for the main research, in order to construct the end-user questionnaires.

For brand awareness, the names of the brands that were mentioned most have been taken to the main research in order to investigate to what extent the end-users know these brands. For brand image the highest scoring brand characteristics have been taken to the main research. These are quality, durability, warranty, energy use, and price.

For corporate image, all items of Fombrun's RQ have been taken to the main research.

And as a last point, considering corporate responsibility, all three parts of corporate responsibility have been mentioned by the retailers, so all three have been taken to the main research. The specific points most mentioned are quality, benefit for distributors and retailers, good after-sales service and a good price for the economic part; attention to the community for the social part; and saving energy and not polluting the environment for the environmental part.

How all these points have been used to construct the end-user questionnaires is described in the next chapter, which discusses the methodology and results of the second study.

4. Study 2: end-user questionnaires

After the analysis of the interviews from the preliminary research, the results as described in the previous chapter have been used for the main research, which is described in this chapter. This is divided into two parts: the methodology (consisting of the questionnaire design, pilot study, respondents and procedure) and the results (divided into the four subjects of the CS-study).

4.1 Questionnaire design

The results from the preliminary research as described in chapter 6 have been used to construct the questionnaire for the main research. This questionnaire consists of an introduction and three research parts, which are described in this section. The entire questionnaire can be found in appendix 3a.

On each of the constructs and subconstructs of the end-user questionnaires that have been measured with the statements a reliability analysis has been performed, in order to analyze whether the items of each construct together measure the construct in total, which measures the internal validity of the instrument. This is discussed at the sections that describe the constructs.

4.1.1 Introduction

On the first page the intentions and some short instructions for the questionnaire are explained. On the second page the different products the questionnaire deals with are shortly explained and visualized with some pictures. This is done so that the respondent knows what the questionnaire is about, and will not think of the wrong products when filling in the questionnaire.

4.1.2 Part 1: Opening questions

The first part of the questionnaire is intended to measure a number of points:

- Brand awareness (TOM, spontaneous and aided)
- Knowledge of Philips lighting, the Philips logo and Philips slogan
- Factors that influence buying decision of lamps
- Places where consumers buy their lamps
- Previous brands that were bought
- Product range of Philips
- Demand for other Philips products

This is partly done by open questions (brand awareness) and by closed multiple choice questions.

Brand awareness has been measured by three items: first, by asking the respondent to write down the first name of a lighting brand that came to his mind (TOM awareness); second, by asking the respondent to write down three other names of lighting brands (spontaneous awareness); and third, by asking the respondent to fill in to what extent they were familiar with 5 lighting brands (Philips, Dien Quang, Rang Dong, Toshiba and Osram) (aided awareness). The answers on this question for Philips (question 3a) have been used as the brand awareness score of Philips.

4.1.3 Part 2: Statements

In the second part 40 statements were given to the respondent, on which they were asked to respond on a 5 point Likert scale (ranging from ‘totally disagree’ to ‘totally agree’), with added to this the option ‘don’t know’. These statements were divided into 4 constructs: brand image, corporate image, service quality and corporate responsibility. These four constructs are explained below. The list of statements can be found in appendix 3b. In the questionnaire all statements have been mixed up, so there are no groups of similar statements.

Brand image

This has been measured with 4 statements regarding the four items resulting from the preliminary research: durability, warranty, energy use, and price. The items of which the brand image construct consists are:

- Philips offers high quality products (item nr. 6, in the questionnaire nr. 22)
- Philips lamps last long (item nr. 28, in the questionnaire nr. 3)
- Philips lamps are energy-saving (item nr. 29, in the questionnaire nr. 8)
- Philips has a good warranty policy (item nr. 30, in the questionnaire nr. 36)

The reliability analysis showed that brand image had an alpha of .77, which means the reliability of the brand image construct is acceptable.

Corporate image

This has been measured with Fombrun’s RQ, which consists of 7 sub-constructs, each with 3 or 4 items (the number of items is mentioned after each sub-construct), as shown in table 4.1:

Table 4.1 – Sub-constructs for measuring corporate image

Sub-construct	***Number of items***	***Alpha***
Emotional appeal	3	.67
Products and services	4	.67
Vision and leadership	3	.44
Workplace environment	3	.45
Financial performance	4	.46
Social responsibility	3	.62

Some examples of statements for measuring these subconstructs are:

- Emotional appeal: ‘I have a good feeling about Philips’
- Products and services: ‘Philips stands behinds its products’
- Vision and leadership: ‘Philips has a clear vision for the future’
- Workplace environment: ‘Philips looks like a good company to work for’
- Financial performance: ‘Philips looks like a low risk investment’
- Social responsibility: ‘Philips supports good causes’

The reliability analysis showed that the corporate image construct had an alpha of .90, which means the reliability of the corporate image construct is high. However, as shown in table 6.1, the reliability of the subconstructs is quite low, especially with the subconstructs of vision and leadership, workplace environment and financial performance. These three subconstructs have therefore not been used in the further analyses.

Sustainability

This has been measured with a number of statements for each part of sustainability:

- Financial: the financial performance from Fombrun’s RQ (items number 7, 13, 24 and 39 in the questionnaire).
- Social: based on both social responsibility from Fombrun’s RQ, with some factors added from Kaptein & Van Tulder (2003) and the factors flowing from the preliminary research.
- Environmental: based on the factors from the environmental policy from Philips, with the factors flowing from the preliminary research added to this.

In the questionnaire the term ‘sustainability’ is replaced by ‘corporate responsibility’, since it is not sure that the respondents are familiar with the term ‘sustainability’. It has been assumed that the term ‘corporate responsibility’ is more known among the respondents.

An example of a statement measuring environmental sustainability is ‘Philips lamps are energy-saving’,an example of a statement measuring social sustainability is ‘Philips treats people well’, and an example of a statement for measuring financial sustainability is ‘Philips tends to outperform its competitors’.

The reliability analysis showed that the sustainability construct had an alpha of .88, which means the construct has a high reliability. However, the reliability analysis also showed that financial sustainability is not reliable with an alpha of only .46. This subconstruct has therefore not been used in the analyses. The subconstructs of environmental sustainability (alpha = .76) and social sustainability (alpha = .77) are quite reliable. Because of the low reliability of the financial sustainability subconstruct, only the complete sustainability construct has been used for the analyses.

Service quality

Finally, service quality has been measured by an adapted version of SERVQUAL (Parasuraman, Zeithaml & Berry, 1988). As explained in the literature, this measurement instrument for the evaluation of service quality originally consists of five sub-constructs: tangibles, reliability, responsiveness, assurance and empathy. Since the end-users do not get into contact with the tangibles part of the service of PEV (which is the commercial center), this has been left out. Furthermore, since there were too many items, for each of the other four sub-constructs two items have been chosen that seemed most suitable to the perception by the respondents of the service quality of PEV. An example of a statement measuring service quality is ‘Philips has employees who give you personal attention’.

The reliability analysis showed that the service quality construct also has a high reliability with an alpha of .84. The separate subconstructs of the service quality constructs have a lower reliability with alpha’s of .56 for the reliability subconstruct, .59 for the responsiveness subconstruct, .42 for the assurance subconstruct and .40 for the empathy subconstruct. These separate subconstructs have therefore not been used for further analyses, and service quality has only been analyzed based on the total construct.

4.1.4 Part 3: Final questions

In the third and final part some final questions are asked. These are:

- Demographic questions (age, gender, income and household size)
- Giving a grade to several parts of Philips (service quality, products in general and lighting products, and a grade for PEV and Philips worldwide)
- Four questions considering future buying intentions are asked: to what extent does the respondent think it certain that he or she will buy a Philips lamp, the next time they will buy a lamp. This was split up in one question for TLD and one for CFL. The same question is asked for electronic ballasts and lamp fittings.

As a last question the respondent could fill in any more comments or remarks he or she had on the questionnaire, and the questionnaire was finished by thanking the respondent for his cooperation.

4.2 Pilot study

Also for the main research, just as for the preliminary research, a short pilot study has been conducted. After the first version of the questionnaire had been created, the pilot study has been conducted to test the questionnaire for possible mistakes or difficult questions. Three acquaintances of the researcher and two employees of PEV have been asked to fill in the questionnaire and mention any problem they had filling it in, or give any comments on the questions. From the results of this pilot study some questions have been rephrased. Also there were some comments that the questionnaire is quite long; however, in order to get good results, all questions were needed, so no questions have been deleted.

After changing the questionnaire according to the results of the pilot study, the questionnaire has been translated into Vietnamese by an employee of PEV. To check whether the translation had been properly conducted, another employee has been asked to translate the Vietnamese questionnaire back into English in presence of the researcher. No problems occurred here, so the first translation has been used for the actual research.

4.3 Respondents

The description of the respondents is split up in the targeted respondents and the actual respondents of the study.

4.3.1 Targeted respondents

The targeted group for the respondents was based on income groups and location. The questionnaires have been held in the two largest cities of Vietnam: HCMC and Hanoi. In each city the target was 150 respondents, which is divided into three groups of 50, based on income. The groups are divided like this:

- A = high income → over $1000 USD a month
- B = middle income → $500 to $1000 USD per month
- C = lower-middle income → $300 - $500 USD per month

This is the income for the total household, so not for the respondent personally. The division in these three groups is based on a request by Philips: for them it is interesting to compare these income groups with each other. The height of the income division is based on the graduation study by Casper Arnolds: he also used this division, so Philips can compare the results of this study with the results of the study of Casper Arnolds.

In total, the target number of the respondents therefore was 300, as shown in table 4.2.

Table 4.2 – Target numbers of respondents per city and income group

	HCMC	***Hanoi***	***Total***
> $1000	50	50	100
$500 - $1000	50	50	100
$300 - $500	50	50	100
Total	150	150	300

The selection of the respondents has been done by a marketing and consulting agency that was hired to conduct the research. This agency has searched for suitable respondents.

4.3.2 Actual respondents

After describing the targeted respondent group, in table 4.3 the demographics are given of the actual respondents of the end-user questionnaires.

Table 4.3 – Demographics of the respondents

Demographic factors					
Gender	***Male***	***Female***	***Unknown***		
Number (N)	180	119	4		
Valid percentage (%)	59.4	39.3	1.3		
Age	***<25***	***25 – 34***	***35 – 44***	***45 – 54***	***>54***
Number (N)	44	144	75	28	11
Valid percentage (%)	14.5	47.5	24.8	9.2	3.6
Household income ($)	***< 200***	***200 - 500***	***500 - 1000***	***>1000***	
Number (N)	67	97	93	46	
Valid percentage (%)	22.1	32.0	30.7	15.2	

Age

For the data analysis, the respondents have been divided into 5 groups (younger than 25 year, 25-34 year, 35-44 year, 45-54 year, 55 and older). Table 8.1 shows that the largest part of the respondents is in the category of 25 to 34 years. The other larger categories are 34 to 44, younger than 25 and 45 to 54 years.

Gender

As shown in table 7.2, the number of male respondents is a little higher. However, this is not a difference which is that big that it has formed a problem for analyses on the differences between men and women.

Household income

As shown in table 7.3, the eventual target numbers (100 respondents for each of the income classes of $200-$500, $500-$1000 and $1000+) have not been achieved, and in the class below $200 (which was not targeted) 67 respondents have filled in the questionnaire. However, since this is a rather large group of respondents, these results still have been used. There are still a quite large number of respondents in each income group, so this has not formed a threat for the analyses.

4.4 Procedure

Since there was not enough time available to conduct 300 questionnaires by the researcher personally, an agency has been hired to conduct the questionnaires. This agency is M&C Co. Ltd., located in HCMC: a marketing and consultancy agency that has experience with this kind of fieldwork. M&C appointed 6 researchers for each city. These researchers have been shortly interviewed on their experience with this kind of research, and for each city the 3 most suitable researchers have been selected to conduct the actual research.

After the selection the researchers have been instructed to make sure they would conduct the research in the right way. The questionnaires (50 + 5 reserve questionnaires) have been given to the researchers.

The questionnaires have been conducted in the period from December 5 to December 15 (2007) in HCMC, and from 16 to 26 December (2007) in Hanoi. In total 330 questionnaires have been spread: the target number of 150 for each city, plus 30 extra questionnaires (5 per researcher). The researchers were instructed to return at least the minimum required 50 questionnaires each, which was the target of the research. In HCMC 147 of the 165 questionnaires have been returned (a response rate of 89.1%); in Hanoi 156 of the 165 questionnaires have been returned (a response rate of 94.5%). For both cities together this is a return rate of 91.2%.

Although some questionnaires have not been filled in completely, every questionnaire had a number of questions filled in, so all returned questionnaires have been used for the data analysis. This means that in total 303 questionnaires have been used for the study. Of this 48.5% was from respondents of HCMC, and 51.5% was from respondents of Hanoi. It has been assumed that this difference is not that big that this will have affected the results of the data analysis.

The results of the questionnaires are discussed in the next sections, starting with the descriptive results.

4.5 Descriptive results

The first part of the results consists of some descriptive results on the subjects that have been researched. The descriptive results start with the subject of brand knowledge. As mentioned before, brand knowledge is split up into brand awareness and brand image, which are described separately in the next two sections.

4.5.1 Brand awareness

Since the results of the BA-study show that there is a lot of difference in the sales of different brands between the two cities (HCMC and Hanoi) of the study, the difference of brand awareness in the two cities also has been analyzed in this part of the results.

A note must be made on the results of question 2: the data analysis showed that many respondents misunderstood this question. The intention was that three *other* brands than the brand mentioned in question 1 (TOM awareness) were given at question 2. However, many respondents again wrote down the TOM brand at question 2. When this occurred this answer has been left out of the data analysis.

Top of mind awareness

The scores on question 1 (TOM awareness) are given in table 4.4.

Table 4.4 – TOM brand divided per city

TOM brand		***Total***	***HCMC***	***Hanoi***
Philips	N	**108***	49	59
	%	35.6	33.3	38.8
Dien Quang	N	96	**61***	22
	%	31.7	41.5	14.5
Rang Dong	N	83	30	**66***
	%	27.4	20.4	43.4
Toshiba	N	7	4	3
	%	2.3	2.7	2.0
Osram	N	3	1	2
	%	1.0	0.7	1.3
Huyn Quang	N	2	2	0
	%	0.7	0.7	0

Note: * = most mentioned by respondents

The results from table 4.4 show that Philips is nationwide the TOM brand, closely followed by Rang Dong and Dien Quang. However, the fact that Philips is most often mentioned as TOM is probably also caused by the fact that the respondents knew the questionnaire was held for Philips. The other brands mentioned are only mentioned a few times. A little surprising is the fact that Rang Dong is mentioned second most as TOM brand, while according to the retailer interviews of the BA-study Dien Quang is nationwide a bigger brand than Rang Dong. However, this difference is quite small.

The results from table 4.4 also show that when comparing the cities, Philips is no longer the TOM brand: in HCMC this is Dien Quang, followed by Philips and Rang Dong; in Hanoi this is Rang Dong, followed by Philips and Dien Quang. These results are not surprising, considering that fact that according to the retailer interviews of the BA-study Dien Quang is the biggest brand in HCMC, and Rang Dong is the biggest brand in Hanoi. Still Philips scores high in both cities, which can again be explained by the fact that the respondents knew it was a Philips questionnaire, and gave socially desirable answers.

It is also clear from these results that the three brands that are most on the top of mind of the respondents are Philips, Dien Quang and Rang Dong: the other three brands score much lower on brand awareness in both cities.

A last and not expected result is the presence of the brand Huyn Quang. This brand was not mentioned at all by the retailers, but still is mentioned 2 times as the TOM brand. However, this amount is so small that it is not considered important for the rest of the analyses.

Spontaneous awareness

After looking at the TOM awareness, the second step is the spontaneous awareness, measured by question 2 in the end-user questionnaire. This is also compared per city. The results on the brand that was first mentioned are given in table 4.5. All results on the spontaneous brand awareness are given in appendix 4b.

Table 4.5 – Sponteanous brand awareness

TOM brand		***Total***	***HCMC***	***Hanoi***
Philips	N	97	36	**61***
	%	32.0	25.0	40.1
Dien Quang	N	91	**65***	25
	%	30.7	45.1	16.4
Rang Dong	N	91	30	**61***
	%	30.4	20.8	40.1
Toshiba	N	12	9	3
	%	4.1	6.4	2.0
Osram	N	3	1	2
	%	1.0	0.7	1.3
Huyn Quang	N	3	3	0
	%	1.0	2.0	0

Note: *= most mentioned by the respondents

Table 4.5 again shows that the three brands most mentioned spontaneous are, just like with the TOM awareness, Philips, Dien Quang and Rang Dong.

When looking at the differences between HCMC and Hanoi, in HCMC Dien Quang is most mentioned, while in Hanoi Philips and Rang Dong are mentioned the same amount of times. A somewhat surprising result is again that in total Rang Dong is mentioned a number of times before Dien Quang, which was not suspected based on the retailer interviews.

Aided awareness

As a last point in brand awareness the aided awareness has been measured with question 3 in the end-user questionnaire. The results of all respondents are shown in table 4.6.

Table 4.6 – Aided brand awareness for all respondents

Brand	***Number (N)***	***Mean (M)***	***Standard Deviation (SD)***
Philips	299	3.3	1.0
Dien Quang	296	3.4	1.0
Rang Dong	294	3.5	1.0
Toshiba	287	2.2	1.1
Osram	281	1.5	0.9

As shown in table 4.6 Philips, Dien Quang and Rang Dong all score just above average. This means they are reasonably well known amongst the respondents. However, Toshiba and Osram score below average: these brands in general seem not well known amongst the respondents.

Also the differences on aided brand awareness between the two cities have been analyzed. The results are shown in table 4.7.

Table 4.7– Aided brand awareness for HCMC and Hanoi

Brand		***HCMC***	***Hanoi***
Philips	N	144	155
	M	3.4	3.2
	SD	1.1	1.0
Dien Quang	N	142	154
	M	3.8	3.1
	SD	1.0	0.9
Rang Dong	N	140	154
	M	3.6	3.3
	SD	1.1	0.9
Toshiba	N	139	148
	M	2.6	1.8
	SD	1.1	1.0
Osram	N	135	146
	M	1.6	1.4
	SD	0.9	0.8

An independent samples T-test has been done to test whether the differences between the cities are significant. The results showed that only the difference between the mean scores for Philips were non significant ($t(297) = 1.5$). All the other brands showed a significant difference between HCMC and Hanoi (Dien Quang: $t(294) = 6.4$; $p < .001$, Rang Dong: $t(292) = 1.9$; $p < .05$, Toshiba: $t(285) = 6.6$; $p < .001$ and Osram: $t(279) = 1.7$; $p < .05$).

This means that all brands except Philips are better known in HCMC than in Hanoi. Surprising here is the fact that Rang Dong is better known in HCMC than in Hanoi; it was suspected that Rang Dong would be known better in Hanoi.

4.5.2 Brand image

This construct has a mean score of 4.0 (SD = 0.5), which is 1 point above average. It can therefore be said that the brand image of Philips lighting products is good. The scores of the individual items are shown in table 4.8.

Table 4.8 – Brand image scores of separate items

Item	***Number (N)***	***Mean (M)***	***Standard Deviation (SD)***
Energy-saving	276	4.2	0.6
Products of good value	236	4.1	0.6
High quality products	252	4.0	0.6
Last long	279	4.0	0.6
Good warranty policy	191	4.0	0.7

Table 4.8 shows that all separate items also score around 4.0. Also the differences of the mean score on brand image have been compared: in HCMC the mean score is 3.99 (SD = 0.51), in Hanoi the mean score is 4.04 (SD = 0.43). This is a very small difference, which is supported by an independent samples t-test: $t(294) = -.884$; $p = 0.19$. This shows that there is no significant difference between the mean scores of HCMC and Hanoi.

A second method of measuring the brand image of Philips was to ask the respondents whether they had bought a Philips lamp in the last year, and if yes, to rate the different characteristics of this product (question 17 in the end-user questionnaire). Although this was mainly intended for the BA-study, this might confirm the scores mentioned above. The results to question 17 are given in table 4.9.

Table 4.9 – Rating of brand characteristics of Philips lamps

Characteristic	***Number (N)***	***Mean score (M)***	***Standard Deviation (SD)***
Energy use	182	4.3	0.6
Durability	182	4.2	0.6
Quality	183	4.1	0.5
Design	182	3.7	0.6
Foreign brand	181	3.7	0.8
Warranty period	179	3.7	0.9
Packaging	182	3.6	0.6
Price	183	3.4	0.7

The results from table 7.9 show that price is rated lowest (M = 3.4, SD = 0.7). Energy use (M = 4.3, SD = 0.6), durability (M = 4.3, SD = 0.6) and quality (M = 4.1, SD =.5) are rated highest. The mean score on all items of question 17 is 3.8 (N = 183, SD = 0.4), which is a little lower than the mean score on the brand image items. However, this is not a big difference. The scores of table 7.9 therefore support the scores on the brand image items.

Grades

The mean grade that was given by the respondents on Philips lighting products is a 7.7 (SD = 1.2) on a ten point scale. This can be called a high grade. To compare Philips lighting products to Philips products in general, the respondents were also asked to give a grade on these products. This was a mean grade of 7.8 (SD = 1.2). This is a very small and non-significant difference (0.1) with the mean grade on lighting products.

When comparing the grades between demographic segments, the only things worth mentioning are that in Hanoi Philips lighting products are somewhat higher rated than in HCMC, the income class of above $1000 rates Philips products somewhat higher, and the group of 55 and older also rates Philips products somewhat higher (however, this is a very small group).

4.5.1 Sustainability

The third subject in the descriptive results is sustainability. This has been measured with the sustainability construct, divided into the three subconstructs of financial, environmental and social sustainability. Although (as discussed in chapter 7) the subconstructs of financial and environmental sustainability are not considered reliable, still the results are described here to give an idea of the scores on these subjects. Also, the respondents have been asked to give a grade on the sustainable behavior of PEV.

The main construct for sustainability had a mean score of 3.7 (N = 270, SD =0.5). This is somewhat above average, but not really high. The scores of the three subconstructs are given in table 4.10.

Table 4.10 – Scores on sustainability subconstructs

Subconstruct	***Number (N)***	***Mean score (M)***	***Standard Deviation (SD)***
Environmental sustainability	200	3.9	0.6
Financial sustainability	227	3.7	0.6
Social sustainability	271	3.7	0.5

Table 4.10 shows that environmental sustainability scores a little higher than financial and social sustainability. The mean grade that the respondents have given to the sustainable behavior of PEV is a 7.2 (N = 298, SD = 1.1). This is positive, but again not really high.

A point worth mentioning is the number of respondents that have answered the questions considering sustainability. For separate items many respondents have answered the questions considering this subject with the answering possibility ‘don’t know’. Some of the statements have only been filled in by less than half of the respondents. Examples of this are statement 14 (Philips has a record of profitability), filled in by 107 respondents, and statement 23 (Philips supports good causes), filled in by 123 respondents. This might mean that a large part of the respondents does not have an idea about the corporate responsible behavior of PEV.

A last point in the subject of corporate responsibility is the role of stakeholder communication. The importance of this subject for the respondents has been measured with two items in the questionnaire: item nr. 39 (Philips should report on their activities concerning corporate responsibility) and item nr. 40 (Philips should be transparent on the environmental, social and economic issues they face). The mean score on item nr. 39 is 3.8 (N=264, SD=.07), and the mean score on item nr. 40 is 4.0 (N=218, SD=0.6). This score is about one point above average, and therefore shows that the respondents on average think it is pretty important that PEV is open on their communication concerning corporate responsibility.

Grades

When looking at the grades given by the respondents on the subject of sustainability and comparing them between demographic groups, no big differences are shown, except for the group of 55 years and older, which gives a higher grade (M=8.1). However, this is a very small group (N=11). The rest of the scores are all between 7.0 and 7.3. These scores can be found in appendix 4d.

4.5.2 Corporate image

The fourth subject of the descriptive results is the corporate image. This has been measured with the corporate image construct, consisting of the items of Fombruns CRQ. Although the separate subconstructs of the CRQ are not considered reliable (as discussed in chapter 7), the descriptives of these subconstructs are shown in table 4.11 to give an overview of the mean scores. Also, the respondents have been asked to give a grade on PEV as a company, and on Philips worldwide as a company.

The scores on all separate items are given in appendix 4a.

Table 4.11 – Mean scores on subconstructs of CRQ

Subconstruct	***Number (N)***	***Mean score (M)***	***Standard Deviation (SD)***
Products and services	281	4.0	0.5
Workplace environment	280	3.8	0.4
Social responsibility	192	3.8	0.6
Emotional appeal	296	3.7	0.6
Vision and leadership	265	3.7	0.6
Financial performance	227	3.7	0.6

Table 4.11 shows that each subconstruct scores quite positive with scores between 3.7 and 4.0. However, none of the scores are above 4.0, so it is not strongly positive.

The mean of the entire construct of corporate image (item 1 to 20) is 3.8 (SD = 0.4). This again is a positive score. The corporate image of PEV with the end-users can therefore be called somewhat positive.

The mean grade that was given by the respondents on PEV as a company is a 6.9 (SD = 1.4), which is slightly positive. The mean grade that was given by the respondents on Philips global is a 7.5 (SD =

1.2), which is quite good. This shows that Philips global is higher graded than PEV, although both grades are positive.

Grades

Not many differences are found between the different demographic groups when comparing the grades given on corporate image. The only things worth mentioning are the somewhat lower score of the group above $1000 (M=6.7), and the somewhat higher score of the group of 55 and older (M=7.3). However, these differences are not really big. These scores can be found in appendix 4e.

4.5.3 Service quality

As a last point in the descriptive results, the results on service quality are discussed. The service quality of PEV has been measured with 8 items from the SERVQUAL scale, and a grade on the service quality of PEV.

The scores on the 8 items that have been used of the SERVQUAL scale are given in table 4.12

Table 4.12 – Scores on service quality

Item	*Number (N)*	*Mean score (M)*	*Standard Deviation (SD)*
Best interests at heart	212	3.9	0.6
Employees are always courteous	173	3.8	0.7
Promise to do something by a certain time	158	3.8	0.7
Interest in solving a problem	137	3.7	0.7
Employees are never too busy	149	3.7	0.7
Knowledge to answer questions	173	3,7	0.7
Personal attention	149	3.7	0.7
Employees are willing to help	173	3.6	0.8

The results in table 4.12 show that the mean scores on all items are almost the same, varying from 3.6 to 3.9, with an SD varying from 0.6 to 0.8. This score is quite positive, but not really high. The mean score on all items is 3.8 (N = 254, SD = 0.5), which corresponds with the scores on the individual items.

In order to give a grade to the service quality of PEV, the respondents were first asked to answer the question if they had ever contacted the Philips customer service, in order to get only answers from people who actually had experience with the customer service. To this question only 42 of the 303 respondents answered with yes; and these respondents gave an average grade of 7.1 (N = 42, SD = 1.3) to the customer service of PEV. Again, this is quite positive, but not really high.

This score somewhat disconfirms the opinion of the retailers that the service of PEV is not really good. However, only 42 respondents have given a grade, and it is also possible that they have given socially desirable answers, so this grade might not be a really reliable representation of the quality of the service quality of PEV. Also, of the 42 respondents that have given a grade, 30 were from HCMC and 12 from Hanoi. This also means the average grade is mainly based on respondents from HCMC.

4.5.4 Buying intention

Finally, the descriptive results on the buying intentions are described. For this subject four questions have been asked, of which for the CS-study the most important question how certain it was for the respondent that he or she would buy a Philips TLD and CFL, next time they needed a lamp. Besides this the same question was also asked for electronic ballasts and lamp fittings, but since these questions were intended for the BA-study, these are not discussed here, but in the BA-report.

The mean score on the question 'Next time you are buying a TLD, how certain is it that you will buy a Philips TLD?' was 3.9 (N = 299, SD = 0.8). The mean score on the question 'Next time you are buying a CFL, how certain is it that you will buy a Philips CFL?' was 4.0 (N = 299, SD = 0.7). This is quite positive and equivalent with the answer 'probably'.

4.5.1 Grades

Although the grades given by the respondents already have been discussed for each separate subject, for the overview in table 4.13 all the scores are given on the dependent variables that are of interest for the CS-study are given.

Table 4.13 – Mean scores on grades and buying intentions

Subject	***Number (N)***	***Mean score (M)***	***Standard Deviation (SD)***
Customer service	42	7.1	1.3
Philips lighting products	295	7.7	1.2
Philips products in general	297	7.8	1.2
Sustainability of PEV	298	7.2	1.1
PEV as a company	299	6.9	1.1
Philips global as a company	297	7.5	1.2
Buying intention TLD	299	3.9	0.8
Buying intention CFL	299	4.0	0.7

For measuring the influence of the different constructs on the buying intention of Philips lamps the scores on TLD and CFL have been taken together. The mean score on these two buying intentions together is 3.9 (N=299, SD=0.7).

4.6 Differences between segments

As a second step in analyzing the results a comparison has been made on the buying intentions of the respondentens and some demographic variables (city, gender, age, education, and income) of the Vietnamese market, in order to identify differences between groups of respondents.

As mentioned before, the scores on buying intentions for TLD and CDL are taken together since the differences between these scores are not significant. The results of this comparison are shown in table 4.14.

Table 4.14 – Scores on buying intentions for TLD + CFL versus demographic segments

Categories					
	HCMC	***Hanoi***			
Number (N)	144	155			
Mean score (M)	3.9	4.0			
Standard Deviation (SD)	0.7	0.7			
	Men	***Women***			
Number (N)	177	118			
Mean score (M)	3.9	4.0			
Standard Deviation (SD)	0.7	0.7			
	Below $200	***$200 - $500***	***$500 - $1000***	***Above $1000***	
Number (N)	65	96	92	46	
Mean score (M)	3.8	4.8	4.0	4.2	
Standard Deviation (SD)	0.8	0.7	0.7	0.5	
	15-24 years	***25-34 years***	***35-44 years***	***45-54 years***	***55 and older***
Number (N)	44	140	75	28	11
Mean score (M)	3.9	3.9	4.0	4.0	4.1
Standard Deviation (SD)	0.6	0.6	0.7	0.9	0.7

The results from table 4.14 show no big differences between the demographic segments. The only difference that is worth mentioning is that in income groups: the results show that the higher the income gets, the higher the score is. However, these differences are still not big: between the lowest and highest group the difference is only 0.4.

4.7 Correlation

After the descriptive results and the comparisons between groups a correlation analysis has been performed in order to find out how the different constructs correlate with each other. The dependent variable (buying intention) is added to this to see how this correlates with the different constructs. For this analysis only the main constructs have been used, since (as explained in chapter 6) the reliability of the subconstructs is too low. The results of the correlation analysis are shown in table 4.15. The total correlation table can be found in appendix 4f.

Table 4.15 – Correlation analysis

	M	SD	Brand aware-ness	Brand image	Corpo-rate image	Sustai-nability	Service quality	Buying inten-tions
Brand awareness	3.3	1.0	-					
Brand image	4.0	.47	.43	-				
Corporate image	3.8	.42	.52	.71	-			
Sustainability	3.7	.49	.42	.54	.74	-		
Service quality	3.8	.46	.24	.48	.66	.63	-	
Buying intention	3.9	.68	.38	.32	.35	.40	.22	-

All scores are significant at the $p < 0.01$ level (2 tailed)

The scores from table 4.15 show that the highest correlation is between corporate image and both sustainability (.74) and brand image (.71). Buying intention and service quality score the lowest (.22), followed by brand awareness and service quality (.24). Also, all construct have a significant correlation, which means that every construct correlates with each of the other constructs. An interesting result is that buying intention does correlate in a positive way with all the constructs, but the scores are quite low (varying from .22 to .40). This means there is not a very strong correlation between buying intentions and the other constructs.

To confirm whether the different subconstructs of the corporate image construct correlate with each other, also a correlation analysis has been performed on the six subconstructs of the CRQ. The results of this correlation analysis showed that all the subconstructs of the CRQ significantly correlate with each other in a positive way. The results of this correlation analysis can be found in appendix 4g..

4.8 Predicting buying intention

As a last step the link between the different constructs and two dependent variables have been measured. This has been done in two steps: first, a regression analysis has been performed to measure the predictive power of sustainability and service quality on the corporate image of PEV; and second, a regression analysis has been performed to measure the predictive power of all construcs (brand knowledge, corporate image, sustainability and service quality) on buying intentions. The results of these analyses are shown in table 4.16.

Table 4.16 –Regression analyses

Constructs	***B***	***SE B***	***β***	***R²***
Corporate image				
- Sustainability	.50	.41	.60	.61
- Service quality	.25	.41	.29	.66
Buying intentions				
- Brand knowledge	.32	.07	.30	.18
- Sustainability	.34	.10	.23	.22

4.8.1 Corporate image

The regression analysis on corporate image showed that both sustainability ($t = 12.3$, $\beta = .60$, $p < .001$) as service quality ($t = 6.1$, $\beta = .29$, $p < .001$) significantly predict the corporate image construct in a positive way, which means that a higher score on sustainability or service quality means a higher score on the corporate image construct.

Also a rather large part of the variance on the corporate image construct is explained by the sustainability and the service quality construct: 66% of the variance is explained by these two constructs ($R^2 = .66$, $F(2) = 234.0$, $p < .001$).

4.8.2 Buying intentions

The second dependent variable and main research goal is how all constructs predict the buying intentions of the Vietnamese consumers. The results of the regression analysis showed that when all constructs are taken together only two of these constructs significantly predicted the scores on buying intentions: the construct of sustainability ($t = 3.4$, $\beta = 0.23$, $p < 0.001$) and brand awareness ($t = 4.5$, $\beta = 0.30$, $p < 0.001$) significantly influence the buying intentions of the respondents in a positive way. However, only 22% of the variance is explained by these constructs ($R^2 = 0.22$, $F(2) = 33.0$, $p < .001$), which is a low percentage.

4.9 Conclusion

In this chapter the design and results of the end-user questionnaires have been discussed. In the next chapter these results are used to answer the research questions and finally answer the main research question: how do the brand knowledge of Philips' products by Vietnamese consumers and the corporate image of Philips with Vietnamese consumers (with the influence of corporate responsibility and service quality on this image) influence the buying behavior of consumers in the Vietnamese lighting market?

5. Conclusions and recommendations

After the discussion of the results in the previous chapter, in this chapter the study is concluded and some recommendations are given. First a few general conclusions are drawn based on the results, after which the research questions as described in chapter 1 are answered . Based on the answers to the research questions the main research question has been answered, and some recommendations are given.

5.1 General conclusions

5.1.1 Correlation between constructs

A first conclusion can be drawn from the correlation analysis that has been performed on the constructs of brand awareness, brand image, corporate image, sustainability, service quality, and the dependent variable of consumer buying behavior. This analysis showed that all constructs that have been measured in the study correlate with each other, which means that every construct of the study has a positive relationship with every other construct. The strongest correlation is between the constructs of corporate image and brand image, and between corporate image and sustainability.

5.1.2 Comparison between demographic segments

A second conclusion can be drawn from the comparisons between market segments. The grades given by the respondents to the products of PEV, sustainability as performed by PEV, PEV as a company and buying intentions have been compared between the two cities in which the study has been performed, and on gender, income groups and age.

This comparison showed no large significant differences between any of those groups of respondents. It therefore can be concluded that the products of PEV, the sustainability as performed by PEV, PEV as a company and the buying intentions for TLD and CFL are graded equally in both cities, by men and women, by respondents of all income groups, and by respondents of all ages.

5.2 Brand knowledge

The first part of the study focused on brand knowledge. The research question of this subject was: 'How does brand knowledge influence the buying behavior of Vietnamese consumers?'

Based on the results for brand awareness can be concluded that Philips is quite well known amongst the Vietnamese consumers. However, in each city separately, Philips is not the best known brand, so this is something that can be improved. As discussed in chapter 3, according to scientific literature brand awareness plays an important role in consumer buying decisions and the main role of brand awareness in general is that when brand awareness is higher, consumers are easier tempted to buy the product than when brand awareness is low. It is therefore important that the brand awareness of Philips is increased.

Considering brand image can be concluded that the image of Philips lighting products is good, with energy use, durability and quality as strongest points, and the price as the weakest point (although this still scored positive). Also, since according to the literature brand image is not the most important point when it concerns low-involvement products, improving the brand image is of less importance for PEV than improving brand awareness.

Finally, brand awareness and brand image are taken together as brand knowledge. The analyses showed that buying intentions are only for a small part predicted by brand awareness and brand image: 17% of the variance on this subject is explained by brand awareness and brand image together.

5.3 Corporate responsibility

The second subject is corporate responsibility. On this subject there were two research questions: the first question on this subject was: 'How is corporate responsibility as performed by Philips valued by Vietnamese consumers?', and the second question was 'How does corporate responsibility as it is carried out by PEV predict the buying behavior of Vietnamese consumers?

In this study corporate responsibility or sustainability has been divided in three parts: financial sustainability, social sustainability, and environmental sustainability. The results show that all three parts are regarded positive, but not really high. It therefore can be concluded that the corporate responsibility as performed by PEV is valued as slightly positive. A note must be made on the number of respondents that have answered questions about corporate responsibility: this is for a number of questions a very low percentage (for some questions only 30% of the respondents). This might mean that the respondents therefore not really know about the corporate responsible behavior of PEV.

The results of the regression analysis showed that corporate responsibility predicts the buying intentions of the respondents for a small part: only 15.8 % of the variance on this construct is explained by the sustainability construct. A last note can be made on the subject of sustainability and stakeholder dialogue. The mean score on the questions about this subject is one point above average, which shows that the respondents on average think it is important that PEV is open on their communication concerning corporate responsibility.

5.4 Corporate image

The third subject concerns the corporate image of PEV. This is again split up into two research questions: 'What is the current corporate image of Philips and how is this influenced by corporate responsibility?' and 'How is the corporate image of PEV influenced by corporate responsibility?'

Based on the results can be concluded that the corporate image of PEV is positive, but not really high, and that all parts of the CRQ (which together make up this image) are rated almost equally.

The results showed that there is a quite large positive influence of the sustainability construct on the corporate image construct (54,5 % of the variance is explained by the sustainability construct). However, no significant influence was found of the corporate image construct on the grade given for PEV as a company.

5.5 Service quality

The fourth subject is the service quality of PEV, with the research question 'How is the service quality of PEV valued by Vietnamese consumers, and how does this influence the buying behavior of Vietnamese consumers?'

Based on the results can be concluded that the service quality of PEV is regarded positive, but not really high. Second, the results show that there is a rather large influence of the service quality construct on the corporate image of PEV in a positive direction: 42.9% of the variance on the corporate image is explained by the service quality construct. However, the influence of service quality on the buying intentions of Vietnamese consumers is very low: only 4,7% of the variance on buying intentions is explained by the service quality construct.

A second important point is the service quality of PEV towards the retailers. The retailers mentioned the service of PEV towards the retailers as an important point. However, the retailers also think that the quality of the service towards themselves is not good enough: it is too difficult for retailers to make use of the service offered by PEV, for example when a broken lamp needs to be replaced: this can only be done by a difficult, time consuming process. This is something that has to be improved, in order to improve the service quality towards the retailers.

5.6 Corporate image and consumer buying behavior

The last research question was: 'How does the current corporate image of Philips predect the consumer buying behavior of Vietnamese consumers?' To answer this question the influence of the corporate image construct on the consumer buying intentions considering TLD and CFL has been measured. These results show that there is a small positive influence of corporate image on the buying intentions of the respondents: only 12.1% of the variance is explained by the corporate image construct.

5.7 Main research question

Finally, based on the separate conclusions as described in the previous sections the main research question can be answered. This question is: 'How do brand knowledge and the corporate image of Philips predict the buying behavior of consumers in the Vietnamese lighting market?

When taking all the separate constructs together and measuring how these together influence the buying behavior of consumers on the Vietnamese lighting market, it can be concluded that for PEV only brand awareness and sustainability significantly (although only for a small part) predict the buying behavior of consumers on the Vietnamese consumer lighting market.

5.8 Recommendations

Based on the conclusions, some recommendations can be given. The recommendations are based on the four subjects of the CS-study.

5.8.1 Brand knowledge

The brand awareness and brand image of Philips are both quite good amongst the consumers in Vietnam. However, in both HCMC and Hanoi Philips is not the best known brand. This is something that should be improved, in which (based on the conclusions) increasing brand awareness is the most important. Some recommendations for improving brand knowledge are:

Create website

The results of the BA-study show that the use of internet is growing strongly in Vietnam: more and more people have an internet connection at home, and internet cafes can be found on every streetcorner. However, at the moment PEV does not use internet for its marketing, and does not have its own website, while the main competitors (Dien Quang and Rang Dong) do have one. It is therefore advisable to create a website for Philips lighting, for example as a part of the global Philips website, but with its own Vietnamese URL and in the Vietnamese language (which is important because many Vietnamese consumers do not speak any other languages than Vietnamese). Especially since Philips is a well-known brand in Vietnam (which means most Vietnamese consumers will know the name Philips), but is not well-known as a lighting brand, a lighting website could help to increase brand awareness of Philips as a lighting brand.

With the help of a website several goals can be achieved in the field of brand knowledge :

- Educate the consumers on the fact that Philips is a high quality lighting brand.
- Inform the consumers on the characteristics of Philips lighting products.
- Educate the consumers on the fact that in the long run you save money with Philips products, since they are more energy-efficient and last longer at a little higher price than competing brands.

A Vietnamese Philips lighting website can be used for other purposes. For example, retailers can use a website for online ordering of products, or consumers can online mention their complaints to PEV. Also, a Philips lighting website can be combined with other Philips divisions in Vietnam: Consumer Products and Medical.

If a website is created, ofcourse the consumers must be made aware of the existence of this website. This can for example be done by the use of billboards, brochures and flyers on which the URL of the Philips lighting website is given.

Internet marketing

A second point in using the internet is internet marketing: promoting Philips products on the internet. Since this study has not focused on this subjects it should be investigated what the best options are for internet marketing, but can for example be thought of placing advertisements on popular Vietnamese sites, or using advertisements in chatting or email programmes like Yahoo messenger or Hotmail.

Promotional material

Besides a website and internet marketing, PEV can make more use of promotional material like brochures on the products of PEV, but also flyers for promotional actions that PEV has to promote their lighting products.

At the moment this is already done, but only in small amounts. It is advisable that PEV makes sure that at retailers there is enough promotional material available to give to consumers. This will help to achieve the goals that are already mentioned at the section above on the Philips lighting website: educat the customers and increase brand awareness.

Billboards and shop fronts

In Vietnam many companies make use of large billboards that are shown everywhere on the streets and also on the fronts of electric shops. In order to increase the brand knowledge of Philips as a lighting brand, PEV can also do this: in this way people will be made more aware of the fact that Philips is a high quality lighting brand. Alsof consumers can be made aware of current promotional actions of PEV, and the URL of a Vietnamese Philips lighting website can be put on billboards.

5.8.2 Sustainability and stakeholder communication

Although sustainability is valued positively by the respondents, the scores and grade on sustainability are not very high. Considering the fact that the results also show that sustainability is for a large part influencing the corporate image, it is advisable to improve the image of sustainability with the consumers.

Important is the role of stakeholder dialogue. Based on the results of this study this is something that Vietnamese consumers consider important: it can therefore be used to communicate the sustainable behavior of PEV to the Vietnamese consumers. It is important that this stakeholder dialogue is used as a means of both giving the consumers information, but also of retrieving information from the consumers and using this to improve their sustainable behavior.

A practical recommendation here is already mentioned at improving brand knowledge: make use of a website and promotional material. In this way PEV can make clear to the consumers what they do to act responsibly, for example by mentioning what they do to reduce pollution, act responsibly towards employees and customers, or make profit (which is for example important for shareholders).

Although using a website is mainly one-way communication from PEV to the consumers, there are possibilities for making this way of communication a dialogue. For example, consumers can express what they think about the sustainable behavior of Philips on an internet forum, or it is possible to ask questions by the use of a website or email.

5.8.3 Corporate image

In the field of corporate image this study shows that the image of PEV is regarded positive, but not very high. However, literature shows that a good image is valuable to a company. Some general advantages are described by Gray and Balmer (1998). They present a model in which they argue that corporate image can lead to competitive advantage. They see the image and reputation of a company as valuable strategic resources. Although this is not directly of interest for this study, it is still advisable to improve the image of PEV. Two recommendations can be given here.

The first recommendation is follows the first recommendation given at the sustainability section described above: the corporate image can be improved by good sustainable behavior, and by communicating this to the consumers regarding stakeholder dialogue.

The second recommendation to improve the corporate image is to improve service quality, which is discussed in the next section.

5.8.4 Service quality

The last recommendation concerns the service quality of PEV, which focuses on two points: service towards the consumers, and service towards the retailers.

Consumers

Service quality is regarded positive, but not very high by the respondents of the study. Since according to the retailers this is an important point, it is necessary that the service is improved. Based on the results of this study and the BA-study, two practical recommendations can be given considering the service quality towards consumers.

First,it must be made easy to return a defective lamp. Because of the complicated warranty process that PEV currently uses, retailers are actually not allowed to directly give a new lamp back for a defective lamp. This should be changed: consumers should directly get a new lamp when one is defective.

The second point is the possibility to hand in complaints. At the moment this can be done by calling PEV by telephone. As already mentioned, if PEV creates a Vietnamese Philips lighting website, it can be made possible for consumers to mention their complaints on the website. Because this is a more anonymous way of giving complaints, it is possible that more people will do this, PEV will get more feedback, which can then again be used to improve the service.

Retailers

An important point mentioned by the retailers the service quality is the complicated warranty process that retailers have to go through when returning defective lamps. Because of this complicated process retailers perceive the service quality of PEV as quite negative. It is therefore recommended that PEV gets rid of this complicated warranty process, and makes sure that it is easy for retailers to give consumers a new lamp for a defective one.

5.8.5 Boundary conditions

Some recommendations have been given to improve brand knowledge, sustainability, corporate image and service quality. However, there are some boundary conditions, and then mainly in two fields: the financial and the strategic field.

Financial

The recommendations given should fit in the marketing budget of PEV. Some of the recommendations given aboven can be quite costly: for example the use of large billboards will cost a lot of money. It should be further researched which of these recommendations are most suitable within the marketing budget of PEV.

Strategic planning

At the moment of the study a new strategic planning for 2008 to 2010 was being made. It Is not known what the exact contents of this strategic planning are, and whether the recommendations given fit into this strategic plan. This is also something that should be researched before the recommendations can be implemented.

5.9 Conclusion

In this chapter the results of the study have been used to answer the research questions and give some recommendations based on these conclusions. In the last chapter of this report is looked back at the study and some critical notes and recommendations for further research are given.

6. Discussion and reflection

Finally, in the last chapter of this report is critically looked back at the study that has been performed. This chapter divided into two parts: some critical notes given on the study, and some recommendations for future research based on these critical notes.

6.1 Critical notes

6.1.1 Research approach

One of important points of this study was the combination of the CS-study and the BA-study. This study has been executed at the same time as the BA-study, and has given input for the BA-study. For a large part this has succeeded and therefore this study has formed some important input for the BA-study. This was mainly the case in the environmental analysis of the BA-study, and in particular the description of the market and the consumers.

Second, an important point is the distinction between brand recall and brand recognition. Although this is according to the literature (e.g. Rossiter & Percy, 1987) an important distinction in low involvement buying decisions, it has proved difficult to actually research this with the approach used for this study. Therefore this distinction has not been researched here. If this had been possible this might have given more insight in the different roles that brand recall and brand recognition can play for Vietnamese consumers when buying lighting products.

Also in the corporate image part the study has been limited to corporate image only: corporate identity and corporate reputation, which are according to the literature both linked to corporate image (e.g. Van Rekom, 1997; Gray & Balmer, 1998; Gotsi & Wilson, 2002), have not been researched here in this study. However, as discussed in chapter 3, in contradiction to corporate image, corporate reputation represents the long-term image a company has with its stakeholders. For future research this might be interesting to investigate, and also if there might be a connection between corporate reputation and consumer buying behavior.

6.1.2 Literature used

The second point is the literature that has been used for this study, and how this has been used for the results and conclusions. Although quite a large scientific base has been used, still the study has been mainly practical of nature. This is for a large part caused by the fact that PEV liked to have a large focus on the practical implications of the study, which is for example reflected in the questions that have been asked in the end-user questionnaires. Also, the CS-study was also intended as input for the BA-study, which again gives focus on the practical side of the study.

6.1.3 Results and conclusions

Some points can be mentioned regarding the results and conclusions. First, the results are only based on data from the two largest cities of Vietnam: HCMC and Hanoi. This means that the results are not representative for the whole of Vietnam. This is something that could not be avoided: in this study there was simply not enough time to do research in more cities and the rural areas.

Two notes must be made on the correlation between the constructs. First, the correlation analysis shows that (although all results are significant) the correlation between the different constructs and consumer buying behavior is small. This might mean that these constructs might not be the best way to measure buying behavior of Vietnamese consumers, and that other factors play a more important role in buying behavior.

The second note on correlation concerns the constructs of corporate image and brand image. These constructs are highly interrelated, which might mean that these constructs measure more or less the same thing: in the eyes of the respondents corporate image and brand image might mean more or less the same.

The final critical note concerns the conclusions of the study. These show that in this study only small influence is found of brand knowledge, corporate image, sustainability and service quality on buying behavior. This means that there are other factors that play a larger role in the consumer buying behavior. This might for example be the price of lighting products, the influence of friends or family, or other factors that have not been found in this study.

6.2 Future research

Based on these notes, some recommendations can be given for future research.

First, based on the notes of the research approach, two points are recommended: investigating the difference between brand recall and recognition amongst Vietnamese consumers, and investigating the corporate identity and corporate reputation of PEV, besides the corporate image, in order to research how these two concepts influence consumer buying behavior.

Second, it can be recommended that future research is more based on scientific research. This is however not of much use for the practical implications for PEV, but more for the scientific side of the research. Interesting here is for example sustainability: this is a subject that is discussed often based on Western countries, but not on Asian countries.

Third and last: since this study only found small influence of brand knowledge, corporate image and sustainability on buying behavior, it should be further investigated what does influence the buying behavior of consumers in the Vietnamese consumer lighting market in a larger way.

6.3 Conclusion

Despite these notes and recommendations for future research, this study has delivered useful results, based on which some recommendations have been given. Although it cannot be said whether the results of this study and the BA-study are enough to make PEV market leader by the end of 2010, it can be said that the results, conclusions and recommendations from both studies can contribute in achieving this goal.

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Appendices

Appendix 1a – Constructs and items from the Corporate Reputation Quotient

Emotional appeal
- I have a good feeling about this company
- I admire and respect this company
- I trust this company

Products and services
- This company stands behinds products/services
- This company offers high quality products/services
- This company develops innovative products/services
- This company offers products/services that are of good value

Vision and leadership
- This company has excellent leadership
- This company has a clear vision for the future
- This company recognizes/takes advantage of market opportunities

Workplace environment
- This company is well managed
- This company looks like a good company to work for
- This company looks like it has good employees

Financial performance
- This company has a record of profitability
- This company looks like a low risk investment
- This company has strong prospects for future growth
- This company tends to outperform its competitors

Social responsibility
- This company supports good causes
- This company is environmentally responsible
- This company treats people well

Appendix 1b – Categories for measuring corporate reputation by Schwaiger

- Quality of employees
- Quality of management
- Financial performance
- Quality of products and services
- Market leadership
- Customer orientation
- Attractiveness
- Social responsibility
- Ethical Behavior
- Reliability
- Fair attitude towards competitors
- Transparency and openness
- Credibility

Appendix 2 – Retailer questionnaire

Lighting Questionnaire

Thank you in advance for participating in this research. This questionnaire is about lighting products of diverse brands. This research is being conducted to get some information on Philips lighting products, and to compare Philips lighting products with that of other brands, in order to improve the Philips products and services.

We would like to ask you to answer the questions on the next pages to your best knowledge. The questionnaire consists of three parts, and will take about 25 to 30 minutes to fill in. At the beginning of each part some instructions are given. Please read these carefully before filling in the answers. All your answers will be kept confidentially, and will not be spread to any other organizations.

If you have any questions or remarks during the questionnaire, please feel free mention them.

Questionnaire number:	
Retailer name:	

Part 1: Open questions

On the following two pages there are a four open questions. Please fill in the answer you think is right in the box below the question. There is no good or wrong answer: it is only your opinion that counts.

1. Names of lighting brands

a. Can you name three names of brands of lamps?

1.
2.
3.

2. General questions on Philips

a. What first comes to mind when you think of Philips?

b. To what extent are you familiar with the Philips logo?

O	I know exactly what the logo looks like
O	I know the logo vaguely
O	I don't know what the logo looks like

c. Can you mention the Philips slogan? If yes, please write it down in the box below.

d. What type of products do you think Philips is known best for in Vietnam?

3. Image of Philips

a. With which key words do you think the image of the **brand Philips** in **general** with buyers can be described?

b. With which key words do you think the image of the **brand Philips** in **lighting products** with buyers can be described?

c. With which key words do you think the image of the **company** Philips with buyers can be described?

4. Corporate responsibility

a. What do you think is important for a company to act responsibly (concerning environmental, social or economic factors) in general?

b. How large do you think the effect of responsible behavior of a company is on the buying behavior of consumers?

O	Very high
O	High
O	Moderate
O	Low
O	Very low

This is the end of the first part. Please turn to the next page for the second part.

Part 2: Closed questions

In this section you are asked to give your opinion on a number of factors. These are all factors that influence the image of a company. This concerns factors that influence companies in general: it is not necessarily about Philips.

The question for all these factors is: **how much do you think the factor mentioned influences the <u>decision</u> of <u>consumers</u> to <u>buy products</u> of a certain company?**

You can answer the questions on a five point scale, ranging from 'not at all' to 'very much'. For example: when you think that brand recall has no influence at all on the decision of consumers to buy a product from a certain company, check the box under 'not at all'. Again, there are no good or wrong answers: it is your opinion that counts.

5. Brand awareness	*Not at all*	*Slightly*	*Average*	*Much*	*Very much*
Brand recall (meaning: the consumer knows the brand)	O	O	O	O	O
Brand recognition (meaning: the consumer recognizes the brand when he sees it)	O	O	O	O	O

6. **Brand image**	*Not at all*	*Slightly*	*Average*	*Much*	*Very much*
Price	O	O	O	O	O
Quality	O	O	O	O	O
Packaging	O	O	O	O	O
Design	O	O	O	O	O
Durability	O	O	O	O	O
Energy use	O	O	O	O	O
Foreign brand	O	O	O	O	O
Warranty	O	O	O	O	O

	Not at all	*Slightly*	*Average*	*Much*	*Very much*
7. Corporate image – the general image of a company amongst consumers	O	O	O	O	O

8. **Emotional appeal**	*Not at all*	*Slightly*	*Average*	*Much*	*Very much*
A good feeling about a company	O	O	O	O	O
Admire and respect a company	O	O	O	O	O
Trust in a company	O	O	O	O	O

9. **Products and Services**	*Not at all*	*Slightly*	*Average*	*Much*	*Very much*
Development of innovative products and services	O	O	O	O	O
High-quality products and services	O	O	O	O	O
Products that are a good value for the money	O	O	O	O	O

10. **Vision and leadership**	*Not at all*	*Slightly*	*Average*	*Much*	*Very much*
Leadership in the company	O	O	O	O	O
A vision for the future	O	O	O	O	O
Taking advantage of opportunities	O	O	O	O	O

11. **Workplace environment**	*Not at all*	*Slightly*	*Average*	*Much*	*Very much*
Quality of the management of the company	O	O	O	O	O
Quality of the company as an employer	O	O	O	O	O
Quality of employees in the company	O	O	O	O	O

12. **Financial performance**	*Not at all*	*Slightly*	*Average*	*Much*	*Very much*
Record of profitability	O	O	O	O	O
Low risk investment	O	O	O	O	O
Future growth	O	O	O	O	O
Outperform competitors	O	O	O	O	O

13. **Social responsibility**	*Not at all*	*Slightly*	*Average*	*Much*	*Very much*
Support of good causes	O	O	O	O	O
Environmental responsibility	O	O	O	O	O
Treatment of people	O	O	O	O	O

Part III: Information on Philips and other brands

In this part some closed and some open questions are given. Please fill in the answers to the questions after or under the questions. With closed questions, check the box of the answer that you think is right (like in the previous part of the questionnaire).

When filling in a number is required, please fill in the number you think is right (for example: when you are asked for sales numbers of a certain kind of lamp, fill in how many lamps you sell monthly). If you have no idea what the answer to the question is, please leave the box blank.

14. Sales of Philips lamps – please fill in the answers in the boxes *under* the questions

a. What types of Philips lamps do you sell (for example TLD or CFL)?

b. How many Philips lamps do you sell monthly?

c. At what price do you sell these lamps?

d. How much profit do you make on a Philips lamp?

a. Type	***b. Number sold***	***c. Price per lamp***	***d. Profit per lamp***

e. On average, what do you think of the prices of Philips lamps?

O	Far too high
O	Too high
O	Good
O	Too low
O	Far too low

15. Sales of other brands – please fill in the answers in the boxes *under* the questions.

a. What other brands of lamps do you sell, and what types of lamps (for example TLD or CFL) do you sell of these brands?

b. How much do you sell of these brands monthly?

c. At what price do you sell these lamps?

d. How much profit do you make on lamps of these brands?

a. Brand + Type	***b. Number sold***	***c. Price per lamp***	***d. Profit per lamp***

16. Product developments of competition

a. In what way have the lamps of the brands other than Philips been improved over the last few years (for example: longer lasting, slimmer, more energy saving)?

b. How do you think the brands other than Philips will improve their lamps in the next two years (for example: longer lasting, slimmer, more energy saving)?

17. Customer service – for each factor a number of examples are given what is meant with that factor. Please check the box of the answer you think is right.

a. How good or bad do you perceive the following factors of customer service **by Philips**?

	Very bad	*Bad*	*Average*	*Good*	*Very good*
Reliability (in time, correct treatment, low number of errors)	O	O	O	O	O
Responsiveness (willing to help, interested, not too busy)	O	O	O	O	O
Assurance (confidence, safe feeling, knowledge)	O	O	O	O	O
Empathy (individual & personal attention, understanding)	O	O	O	O	O

b. What grade (from 1 to 10, in which 1 is very bad and 10 is excellent) would you give the customer service of Philips?

c. How good or bad do you perceive the customer service towards end-users **by other brands**?

	Very bad	*Bad*	*Average*	*Good*	*Very good*
Reliability (in time, correct treatment, low number of errors)	O	O	O	O	O
Responsiveness (willing to help, interested, not too busy)	O	O	O	O	O
Assurance (confidence, safe feeling, knowledge)	O	O	O	O	O
Empathy (individual & personal attention, understanding)	O	O	O	O	O

d. What grade (from 1 to 10, in which 1 is very bad and 10 is excellent) would you give the customer service of other brands?

18. Potential other Philips products

a. What other lighting products do you think Philips should sell in Vietnam besides TLD and CFL? This can be any lighting product, including products that Philips does not sell (yet).

b. Which of these Philips lighting products do you think would be a success in Vietnam (more than one answer is possible)?

O	Battens
O	Starters
O	Ballasts
O	Complete lighting sets

19. Final remarks

a. If you have any other remarks on Philips, its products, services, or if you have anything to add to this questionnaire, you can write this down in the box below.

This is the end of the questionnaire. Thank you very much for your time and your cooperation in our research!

Appendix 3a – End-user questionnaire

Lighting Questionnaire

Thank you in advance for helping us in our research.

The goal of this questionnaire is to obtain information about what you, as a user of lighting products, think is important when you buy lighting products. With this information we can improve our products and services.

The questionnaire consists of three parts. In the first parts some questions are asked about lighting products and different lighting brands. In the second part you are asked to give your opinion on a number of statements considering Philips. Finally, in the third part some final questions are asked. At the beginning of each part some instructions are given: please read these carefully before filling in the answers. The questionnaire will take about 25 to 30 minutes to fill in.

We would like to ask you to answer all the questions to your best knowledge. We point out that there are no good or wrong answers: it is only your opinion that counts. Also, all your answers will be kept confidentially, and will not be spread to any other organizations or used for any other goals than this research.

If you have any questions or remarks during the questionnaire, feel free to mention them.

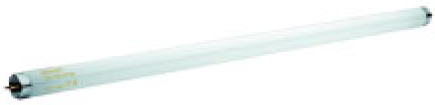
Philips products

This questionnaire deals with a number of Philips products. These products are shown on this page.

In this questionnaire the focus is mainly on two types of lamps: TLD (tube lamps) and CFL (compact fluorescent lamps), as shown on the pictures below. We would like you to think about your decision when buying one of these types of lamps, and *not* on other types of lamps (for example halogen lamps).

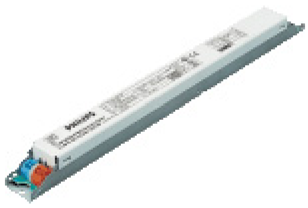
CFL : compact fluorescent lamp

TLD : tube lamp



Besides lamps, some questions are asked about ballasts. Philips promotes the use of *electronic* ballasts. Although these are ballasts are more expensive than the original *electromagnetic* ballasts, they are more energy-saving (up to 30%). Also, with an electronic ballast multiple lamps can be lighted, where on electromagnetic ballasts only one lamp works. This means that in the long run you save money on using an electronic ballast instead of an electromagnetic ballast.

Electronic ballast



Electromagnetic ballast

Finally, a few questions are asked about lamp fittings. With this we mean the fitting of both TLD as CFL lamps, as shown on the picture below.

Fitting TLD

Fitting CFL

Part 1 – Opening questions

This part consists of several open, and several closed questions. You can fill in the answers to the open questions in the box under the question; for the closed questions, you can check the box of the answer you think is right.

1. What is the first name of a brand of lamps that comes to your mind?

2. Can you name three other names of brands of lamps?

1.
2.
3.

3. **How well do you know the following brands of lamps?**

	Not at all	*Vaguely*	*Somewhat*	*Quite well*	*Very well*
Philips	O	O	O	O	O
Dien Quang	O	O	O	O	O
Rang Dong	O	O	O	O	O
Toshiba	O	O	O	O	O
Osram	O	O	O	O	O

4. Before this questionnaire, had you ever heard of Philips as a brand of lamps?

O	Yes
O	No

5. Do you know the general Philips slogan 'Sense and Simplicity'?

O	Yes → continue to question 6
O	No → continue to question 7

6. If 'yes' to question 5: where have you heard or read the general Philips slogan?

O	Philips commercial
O	Advertisement in magazine or newspaper
O	Packaging of Philips lamps
O	Other (please specify):

7. Do you know the Philips lighting slogan 'Longer lasting, more saving'?

O	Yes → continue to question 8
O	No → continue to question 9

8. If 'yes' to question 7: where have you heard or read the Philips lighting slogan?

O	Philips commercial
O	Advertisement in magazine or newspaper
O	Packaging of Philips lamps
O	Other (please specify):

9. Do you know what the Philips logo looks like?

O	Yes → continue to question 10
O	No → continue to question 11 (next page)

10. If 'yes' to question 9: where do you know the Philips logo from?

O	Philips commercial
O	Advertisement in magazine or newspaper
O	Packaging of Philips lamps
O	Other (please specify):

11. How important are the following factors to you when you buy a new lamp?

	Not important	*Slightly important*	*Neutral*	*Important*	*Very important*
Price	O	O	O	O	O
Quality (e.g. good light, no black ends)	O	O	O	O	O
Packaging	O	O	O	O	O
Design	O	O	O	O	O
Durability / lamp life	O	O	O	O	O
Energy use	O	O	O	O	O
Foreign brand	O	O	O	O	O
Warranty period	O	O	O	O	O

12. What brand of lamps do you usually buy?

O	Philips
O	Dien Quang
O	Rang Dong
O	Toshiba
O	Osram
O	Another brand (fill in the name):
O	Don't know

13. Last time you bought a lamp, where did you buy it?

O	Supermarket → continue to question 15 (next page)
O	Electric shop → continue to question 14
O	Mama papa shop → continue to question 14
O	Manufacturer shop → continue to question 14
O	Somewhere else, namely:

14. If not ‘supermarket’ to question 13: why did you not buy the lamp in the supermarket?

O	Too expensive
O	Inconvenient (for example: too far away)
O	Don’t have the lamp I want
O	Other reason (please specify):

15. Next time you will buy a lamp, where will you buy it?

O	Supermarket
O	Electric shop
O	Mama papa shop
O	Manufacturer shop
O	Somewhere else, namely:

16. Have you bought a Philips lamp in the last year?

O	Yes → continue with question 17
O	No → continue with question 18

17. If ‘yes’ to question 16: how would you rate the following characteristics of Philips lamps?

	Very bad	*Bad*	*Neutral*	*Good*	*Very good*
Price	O	O	O	O	O
Quality	O	O	O	O	O
Packaging	O	O	O	O	O
Design	O	O	O	O	O
Durability	O	O	O	O	O
Energy use	O	O	O	O	O
Foreign brand	O	O	O	O	O
Warranty period	O	O	O	O	O

18. Do you think there are enough different types, colors and wattages of Philips lamps available?

O	Yes → continue to question 20 (next page)
O	No → continue to question 19 (next page)

19. If 'no' to question 18: what should Philips expand their product range with (more than one answer possible)?

O	More different types of lamps
O	More different lamp colors
O	More different wattages
O	Something else, namely:

20. Do you think there is demand for the following Philips products in Vietnam?

	Certainly not	*Probably not*	*Maybe*	*Probably*	*Absolutely*
Electronic ballasts	O	O	O	O	O
Lamp fittings	O	O	O	O	O
Starters	O	O	O	O	O
Complete lighting sets	O	O	O	O	O

21. Are you willing to pay a higher price for an electronic ballast instead of an electromagnetic ballast, if this means you will save money in the long run?

O	Yes
O	No

This is the end of part 1. Please turn to the next page for part 2.

Part 2 – Statements

In this part you are asked to what extent you agree with a number of statements. You can answer this on a 5 point scale, ranging from 'totally disagree' to 'totally agree'. For example: when you totally disagree with the statement 'I have a good feeling about Philips', check the box under 'totally disagree'. If you really don't know the answer, check the box under 'Don't know'.

There are no good or wrong answers: it is only your opinion that counts. We therefore ask you not to

Important: when answering questions these questions, please think of **Philips Lighting in Vietnam,** and *not* of the worldwide company Philips.

	Totally disagree	*Disagree*	*Neutral*	*Agree*	*Totally agree*	*Don't know*
1. I have a good feeling about Philips	O	O	O	O	O	O
2. Philips should report on their activities concerning corporate responsibility	O	O	O	O	O	O
3. Philips lamps last long	O	O	O	O	O	O
4. Employees of Philips are always willing to help you	O	O	O	O	O	O
5. Philips is a company that is involved in the community	O	O	O	O	O	O
6. I admire and respect Philips	O	O	O	O	O	O
7. Philips looks like a low risk investment	O	O	O	O	O	O
8. Philips lamps are energy-saving	O	O	O	O	O	O
9. The employees of Philips seem satisfied with their job	O	O	O	O	O	O
10. Philips stands behinds its products	O	O	O	O	O	O
11. Philips is environmentally responsible	O	O	O	O	O	O

12. I trust Philips	O	O	O	O	O	O
	Totally disagree	*Disagree*	*Neutral*	*Agree*	*Totally agree*	*Don't know*
13. Philips has strong prospects for future growth	O	O	O	O	O	O
14. Employees of Philips have the knowledge to answer your questions	O	O	O	O	O	O
15. Philips saves energy in its production process	O	O	O	O	O	O
16. Philips develops innovative products	O	O	O	O	O	O
17. Philips pays attention to the health and safety of people	O	O	O	O	O	O
18. Philips has your best interests at heart	O	O	O	O	O	O
19. Philips should be transparent on the environmental, social and economic issues they face	O	O	O	O	O	O
20. Philips has excellent leadership	O	O	O	O	O	O
21. Philips has employees who give you personal attention	O	O	O	O	O	O
22. Philips offers high quality products	O	O	O	O	O	O
23. Philips treats people well	O	O	O	O	O	O
24. Philips tends to outperform its competitors	O	O	O	O	O	O
25. The price of Philips products is not too high	O	O	O	O	O	O
26. Philips has a clear vision for the future	O	O	O	O	O	O
27. Philips offers products that are of good value	O	O	O	O	O	O

28. When you have a problem, Philips shows a sincere interest in solving it	O	O	O	O	O	O
	Totally disagree	*Disagree*	*Neutral*	*Agree*	*Totally agree*	*Don't know*
29. Philips is well managed	O	O	O	O	O	O
30. Employees of Philips are never too busy to respond to your requests	O	O	O	O	O	O
31. Philips recognizes and takes advantage of market opportunities	O	O	O	O	O	O
32. At Philips every employee has equal opportunities	O	O	O	O	O	O
33. Employees of Philips are consistently courteous with you	O	O	O	O	O	O
34. When Philips promises to do something by a certain time, it does so	O	O	O	O	O	O
35. Philips looks like a good company to work for	O	O	O	O	O	O
36. Philips has a good warranty policy	O	O	O	O	O	O
37. Philips does not produce too much waste	O	O	O	O	O	O
38. Philips looks like it has good employees	O	O	O	O	O	O
39. Philips has a record of profitability	O	O	O	O	O	O
40. Philips supports good causes	O	O	O	O	O	O

This is the end of part 2. Please turn to the next page for the final part of the questionnaire.

Part 3 – Final questions

In this last part some finalizing questions are asked. Since this is some personal information, we would like to stress again that this information will stay confidential, and will *not* be used for any other purpose than this research.

22. What is your age?

……	years

23. What is your gender?

O	Male
O	Female

24. What is your monthly household income in US dollars?

O	Below $200
O	Between $200 and $500
O	Between $500 and $1000
O	More than $1000

25. What is the highest level of education you have completed?

O	Primary school
O	Secondary school
O	High school
O	University

26. What is the size of your house?

O	Smaller than 35 m2
O	Between 35 and 60 m2
O	Larger than 60 m2

27. What is your marital status?

O	Single
O	Married, no children
O	Married with children

28. Have you ever contacted the Philips customer service?

O	Yes → continue with question 29
O	No → continue with question 30

29. If 'yes' to question 28: what grade would you give the Philips customer service (from 1 to 10, in which 1 is very bad en 10 is excellent)?

30. What grade would you give Philips *lighting* products?

31. What grade would you give Philips products *in general*? These are not only lighting products, but *all* Philips products (for example irons, rice cookers, blenders, televisions etc).

32. What grade would you give to the *corporate responsible behavior* of Philips in Vietnam (concerning environmental, social and economic issues all together)?

33. What grade would you give *Philips Lighting Vietnam?* Think here of Philips Lighting as a company in Vietnam only.

34. What grade would you give *Philips global*? Think here of Philips as a worldwide company.

Please turn to the next page for the final four questions.

	Certainly not	*Probably not*	*Maybe*	*Probably*	*Absolutely certain*
35. Next time you are buying a TLD, how certain is it that you will buy a Philips TLD?	O	O	O	O	O
36. Next time you are buying a CFL, how certain is it that you will buy a Philips CFL?	O	O	O	O	O
37. Next time you are buying a ballast, how certain is it that you will buy a Philips *electronic* ballast instead of an *electromagnetic* ballast?	O	O	O	O	O
38. Next time you are buying a lamp fitting, how certain is it that you will buy a Philips fitting?	O	O	O	O	O

39. If you have any other remarks on Philips, its products, or its services, or if you have anything to add to this questionnaire, you can write this down in the box below.

This is the end of the questionnaire. Thank you very much for helping us in our research!

Appendix 3b – List of all statements

A. Corporate image: Fombrun's CRQ

Emotional appeal	Item number in questionnaire
1. I have a good feeling about Philips	1
2. I admire and respect Philips	6
3. I trust Philips	12
Products and Services	
4. Philips stands behinds its products	10
5. Philips develops innovative products	16
6. Philips offers high quality products	22
7. Philips offers products that are of good value	27
Vision and leadership	
8. Philips has excellent leadership	20
9. Philips has a clear vision for the future	26
10. Philips recognizes and takes advantage of market opportunities	31
Workplace environment	
11. Philips is well managed	29
12. Philips looks like a good company to work for	35
13. Philips looks like it has good employees	38
Financial performance	
14. Philips has a record of profitability	39
15. Philips looks like a low risk investment	7
16. Philips has strong prospects for future growth	13
17. Philips tends to outperform its competitors	24
Social responsibility	
18. Philips supports good causes	40
19. Philips is environmentally responsible	11
20. Philips treats people well	23

B. Corporate responsibility

Extra questions, added by researcher

Social responsibility (extra questions) → based on Kaptein & Van Tulder	
21. Philips is a company that is involved in the community	5
22. Philips pays attention to the health and safety of people	17
23. At Philips every employee has equal opportunities	32
24. The employees of Philips seem satisfied with their job	9

Environmental responsibility (extra questions) → based on Philips policy	
25. Philips saves energy in its production process	15
26. Philips does not produce too much waste	37

C. Brand image

Brand image characteristics Philips → based on preliminary research (added to Fombrun)	
27. The price of Philips products is not too high	25
28. Philips lamps last long	3
29. Philips lamps are energy-saving	8
30. Philips has a good warranty policy	36

D. Service

Service Philips → Based on SERVQUAL	
Reliability	
31. When Philips promises to do something by a certain time, it does so	34
32. When you have a problem, Philips shows a sincere interest in solving it	28
Responsiveness	
33. Employees of Philips are always willing to help you	4
34. Employees of Philips are never too busy to respond to your requests	30
Assurance	
35. Employees of Philips are consistently courteous with you	33
36. Employees of Philips have the knowledge to answer your questions	14
Empathy	
37. Philips has employees who give you personal attention	21
38. Philips has your best interests at heart	18

E. Stakeholder dialogue

Transparency → added by researcher	
39. Philips should report on their activities concerning corporate responsibility	2
40. Philips should be transparent on the environmental, social and economic issues they face	19

Appendix 4a – Scores on all items end-user questionnaire

The number before each statement corresponds with the order the items as in appendix 2c, and not with the order of items in the end-user questionnaire.

#	*Statement*	*N*	*Min. score*	*Max. score*	*Mean score*	*SD*
1	I have a good feeling about Philips	294	1	5	3.8	.71
2	I admire and respect Philips	242	1	5	3.6	.69
3	I trust Philips	242	1	5	3.9	.67
4	Philips stands behind its products	193	2	5	3.8	.58
5	Philips develops innovative products	210	2	5	4.1	.62
6	Philips offers high quality products	252	2	5	4.0	.61
7	Philips offers products that are of good value	236	3	5	4.1	.58
8	Philips has excellent leadership	216	1	5	3.7	.67
9	Philips has a clear vision for the future	162	2	5	3.9	.60
10	Philips recognizes and takes advantage of market opportunities	139	2	5	3.7	.66
11	Philips is well managed	225	2	5	3.9	.48
12	Philips looks like a good company to work for	246	2	5	3.9	.52
13	Philips looks like it has good employees	136	2	5	3.7	.62
14	Philips has a record of profitability	107	2	5	3.9	.71
15	Philips looks like a low risk involvement	146	1	5	3.4	1.02
16	Philips has strong prospects for future growth	204	2	5	3.9	.57
17	Philips tends to outperform its competitors	168	2	5	3.8	.66
18	Philips supports good causes	123	3	5	4.2	.69
19	Philips is environmentally responsible	155	2	5	3.9	.66
20	Philips treats people well	143	2	5	3.6	.64
21	Philips is a company that is involved in the community	193	2	5	3.6	.67

22	Philips pays attention to the health and safety of people	189	2	5	3.9	.62
23	At Philips every employee has equal opportunities	138	2	5	3.8	.69
24	The employees of Philips seem satisfied with their job	118	2	5	3.6	.67
25	Philips saves energy in its production process	170	3	5	4.1	.69
26	Philips does not produce too much waste	148	2	5	4.0	.71
27	The price of Philips products is not too high	262	1	5	3.5	.84
28	Philips lamps last long	279	2	5	4.0	.62
29	Philips lamps are energy-saving	276	3	5	4.2	.62
30	Philips has a good warranty policy	191	2	5	4.0	.66
31	When Philips promises to do something by a certain time, it does so	158	2	5	3.8	.66
32	When you have a problem, Philips shows a sincere interest in solving it	137	2	5	3.7	.74
33	Philips employees are always willing to help you	173	1	5	3.6	.75
34	Employees of Philips are never too busy to respond to your requests	149	2	5	3.7	.69
35	Employees of Philips are consistently courteous to you	173	2	5	3.8	.68
36	Employees of Philips have the knowledge to answer your questions	173	2	5	3.7	.66
37	Philips has employees who give you personal attention	149	2	5	3.7	.70
38	Philips has your best interests at heart	212	2	5	3.9	.61
39	Philips should report on their activities concerning corporate responsibility	264	2	5	3.8	.70
40	Philips should be transparent on the environmental, social and economic issues they face	218	2	5	4.0	.62

Appendix 4b – Scores on spontaneous brand awareness

Spontaneous brand 1	***Total (N)***	***Total (%)***	***HCMC (N)***	***HCMC (%)***	***Hanoi (N)***	***Hanoi (%)***
Philips	**97***	32.0	36	25.0	**61***	40.1
Dien Quang	91	30.7	**65***	45.1	25	16.4
Rang Dong	90	30.4	30	20.8	**61***	40.1
Toshiba	12	4.1	9	6.3	3	2.0
Osram	3	1.0	1	0.7	2	1.3
Huyn Quang	3	1.0	3	2.0	0	0

Spontaneous brand 2	***Total (N)***	***Total (%)***	***HCMC (N)***	***HCMC (%)***	***Hanoi (N)***	***Hanoi (%)***
Rang Dong	**118***	38.9	**49***	34.4	**69***	45.4
Philips	78	25.7	39	27.3	39	25.7
Dien Quang	76	25.1	42	29.4	34	22.4
Toshiba	15	5.0	7	4.9	8	5.3
Huyn Quang	5	1.7	5	3.0	0	0
Osram	3	1.0	1	0.7	2	1.3

Spontaneous brand 3	***Total (N)***	***Total (%)***	***HCMC (N)***	***HCMC (%)***	***Hanoi (N)***	***Hanoi (%)***
Dien Quang	**102***	33.7	22	15.9	**80***	54.8
Philips	88	29.0	**47***	34.1	41	28.1
Rang Dong	47	15.5	37	26.8	10	6.8
Toshiba	35	11.6	24	17.4	11	7.5
Osram	9	3.0	5	3.6	4	2.7
Huyn Quang	3	1.0	3	2.2	0	0

Appendix 4c – Scores on Philips lighting products versus demographic groups

Categories					
	HCMC	***Hanoi***			
Number (N)	142	153			
Mean score (M)	7.6	7.8			
Standard Deviation (SD)	1.3	1.1			
	Men	***Women***			
Number (N)	174	118			
Mean score (M)	7.7	7.7			
Standard Deviation (SD)	1.2	1.2			
	Below $200	***$200 - $500***	***$500 - $1000***	***Above $1000***	
Number (N)	65	93	91	46	
Mean score (M)	7.7	7.5	7.7	8.0	
Standard Deviation (SD)	1.2	1.4	1.0	1.0	
	15-24 years	***25-34 years***	***35-44 years***	***45-54 years***	***55 and older***
Number (N)	43	139	74	27	11
Mean score (M)	7.4	7.8	7.8	7.5	8.3
Standard Deviation (SD)	1.1	1.2	1.0	1.5	0.8

Appendix 4d – Scores on sustainability versus demographic groups

Categories					
	HCMC	***Hanoi***			
Number (N)	144	154			
Mean score (M)	7.2	7.1			
Standard Deviation (SD)	1.2	1.0			
	Men	***Women***			
Number (N)	176	118			
Mean score (M)	7.1	7.2			
Standard Deviation (SD)	1.1	1.1			
	Below $200	***$200 - $500***	***$500 - $1000***	***Above $1000***	
Number (N)	43	141	74	46	
Mean score (M)	7.2	7.0	7.3	7.2	
Standard Deviation (SD)	1.2	1.3	1.0	0.9	
	15-24 years	***25-34 years***	***35-44 years***	***45-54 years***	***55 and older***

Number (N)	43	141	74	28	11
Mean score (M)	7.2	7.0	7.3	7.1	8.1
Standard Deviation (SD)	1.1	1.1	1.0	1.2	1.1

Appendix 4e – Scores on PEV as a company versus demographic groups

Categories					
	HCMC	***Hanoi***			
Number (N)	145	154			
Mean score (M)	7.0	6.9			
Standard Deviation (SD)	1.3	0.9			
	Men	***Women***			
Number (N)	176	119			
Mean score (M)	6.9	6.9			
Standard Deviation (SD)	1.1	1.1			
	Below $200	***$200 - $500***	***$500 - $1000***	***Above $1000***	
Number (N)	66	95	92	46	
Mean score (M)	7.1	7.0	6.9	6.7	
Standard Deviation (SD)	1.3	1.1	1.0	0.9	
	15-24 years	***25-34 years***	***35-44 years***	***45-54 years***	***55 and older***
Number (N)	44	141	74	28	11
Mean score (M)	6.8	7.0	6.8	6.9	7.3
Standard Deviation (SD)	1.4	1.0	1.0	1.1	1.0

Appendix 4f – Correlation table main constructs

		Brand awareness	***Brand image***	***Corporate image***	***Sustainability***	***Service***	***Buying intentions***
Brand awareness	Correlation*	1					
	Significance		-	-	-	-	-
	Number	299					
Brand image	Correlation*	,426(**)	1				
	Significance	,000		-	-	-	-
	Number	292	296				
Corporate image	Correlation*	,524(**)	,705(**)	1			
	Significance	,000	,000		-	-	-
	Number	296	295	300			
Sustainability	Correlation*	,424(**)	,536(**)	,738(**)	1		
	Significance	,000	,000	,000		-	-
	Number	266	270	270	270		
Service	Correlation*	,243(**)	,474(**)	,655(**)	,631(**)	1	
	Significance	,000	,000	,000	,000		-
	Number	251	253	254	245	254	
Buying intentions	Correlation*	,376(**)	,320(**)	,348(**)	,397(**)	,218(**)	1
	Significance	,000	,000	,000	,000	,001	
	Number	295	293	297	267	251	299

*: Pearson Correlation

**: significant at the 0.01 level (2-tailed)

Appendix 4g – Correlation table CRQ subconstructs

		Emotional appeal	*Products and services*	*Vision and leader-ship*	*Work-place environ-ment*	*Financial perfor-mance*	*Social respon-sibility*
Emotional appeal	Correlation*	1					
	Significance		-	-	-	-	-
	Number	296					
Products and services	Correlation*	,496(**)	1				
	Significance	,000		-	-	-	-
	Number	278	281				
Vision and leadership	Correlation*	,449(**)	,497(**)	1			
	Significance	,000	,000		-	-	-
	Number	263	255	265			
Workplace environment	Correlation*	,513(**)	,500(**)	,426(**)	1		
	Significance	,000	,000	,000		-	-
	Number	276	269	253	280		
Financial performance	Correlation*	,460(**)	,501(**)	,504(**)	,440(**)	1	
	Significance	,000	,000	,000	,000		-
	Number	226	224	211	221	227	
Social responsibility	Correlation*	,455(**)	,588(**)	,349(**)	,480(**)	469(**)	1
	Significance	,000	,000	,000	,000	,000	
	Number	191	189	184	189	187	192

*: Pearson Correlation
**: significant at the 0.01 level (2-tailed)

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