

**Investigating Determinants and Perceived Consequences
of Auditory Identity Management:
A Corporate Perspective Among UK Companies**

A thesis submitted for the degree of Doctor of Philosophy

by

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Abstract

Corporate sound as a company-controlled element of corporate identity management has been widely ignored in corporate identity and corporate image literature so far. Moreover, established corporate identity models show some visual dominance that has inhibited the integration of other sensory elements such as the auditory dimension.

This thesis advances current knowledge in the corporate identity, corporate image and corporate communication domain by investigating the construct of auditory identity from a corporate perspective. In detail, the study investigates factors that determine the management of auditory identity as well as consequences of corporate auditory identity management (CAIM) as perceived by managers.

A triangulated research approach was employed by using qualitative data from interviews with managers and consultants from UK companies as well as quantitative data from questionnaires completed by managers from UK companies in the media, information and communication as well as the banking and finance industry. While qualitative data initially was used to gain deeper understanding of the under-researched auditory topic, quantitative data was statistically examined using EFA and PLS-SEM to test the structural model.

Findings suggest, *inter alia*, that the definition of corporate auditory identity provided in this research is widely supported by qualitative data. Moreover, quantitative data indicates that the support of the CEO is a key factor for the successful implementation of an auditory identity programme. Furthermore, all ten consequences of corporate auditory identity management such as gaining differentiation, improving corporate image, supporting consistent corporate communication and increasing recognisability just to name a few are widely supported by qualitative as well as quantitative data.

This thesis advances corporate identity, corporate image and communication literature in many ways. Mainly, it provides a valid definition of the new construct of auditory identity as well as scales for measuring corporate auditory identity management on which researchers can build in the future. Based on the identified potential of corporate sound academics are encouraged to overcome the visual dominance by incorporating auditory identity into future concepts, frameworks and models.

Moreover, managers can benefit from this research and the provided definition of auditory identity in particular as it reduces the uncertainty about the auditory domain and suggests a more holistic view of corporate identity management. Additionally, this study provides managers with a deeper understanding of the potential of corporate sound by testing a set of consequences of auditory identity management. Consequently, managers are advised to employ a more strategic management of sonic elements and applications in the future.

To sum up, this research is one of the first that investigates the management of sound from a corporate perspective and the researcher strongly believes that it constitutes a foundation that facilitates a variety of avenues for research.

To Maja, Simon and Jonathan

per aspera ad astra

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1. Introduction

1.1 Introduction

Corporate visual identity has been recognised by many academics to be an important part of the corporate identity mix and is considered to be crucial when conveying the identity of an organisation (e.g. Abratt, 1989; Baker and Balmer, 1997; Dowling, 1994; Melewar and Saunders, 1999; Van den Bosch et al, 2006a). However, other sensory elements have been given little consideration by researchers so far. A review of literature reveals that non-visual cues based on senses such as hearing, smelling, touching and tasting have been mostly ignored by marketing academics until now. Schmitt and Simonson (1997), Schmitt (1999) and Balmer (2001a) provide rather rare exceptions when referring to non-visual cues. For instance, Schmitt (1999) calls for a change from traditional to experiential marketing, which not only addresses customers rationally but also emotionally. Consequently, aiming for delivering pleasurable experiences, Schmitt (1999) refers to sensory experiences as one of five 'strategic experiential modules'. In detail, Schmitt (1999:61) points out that "*The SENSE module - or SENSE marketing - appeals to the senses with the objective of creating sensory experiences, through sight sound, touch, taste and smell*".

Balmer (2001a:267) for example argues that there is a visual dominance that "*is clouding over the importance of the other senses of sound, scent, taste and touch*". In addition, non-visual elements can play a vital role regarding the communication of corporate identity and the formation of corporate image. As Balmer (2001a:267) pointed out: "*...upon reflection it becomes apparent that the non-visual senses can be just as powerful in communicating the identity of a collective group*". This view is supported by practitioners such as Lindstrom (2005a:69) who argues that "*... all five senses are important in any form of communication and life experience*". Moreover, to illustrate the importance of all sensory elements Balmer (2001a:267) provides the example of the Catholic Church: "*The church's distinctiveness is communicated through, among others, symbolism (vestments, church furnishings, architecture, posture of clergy and laity), sound (Latin, Gregorian chant and polyphony), smell (incense), touch (holy water) and taste (taking the sacrament)*". Overall, the notion

of academics and practitioners (Balmer, 2001a; Lindstrom, 2005a) clearly indicate the need for taking a holistic sensory perspective and for considering additional sensory dimensions as part of the corporate identity domain. This holistic sensory perspective, which will be explained in the next sections in more detail, constitutes the starting point and the underlying perspective of this research.

1.1.1 Unfolding the Sensory Perspective

Architecture provides an excellent example in order to start unfolding the sensory perspective. Various design agencies intensively deal with corporate architecture, interior design and shop design. For example, the London based design agency 'Jump Studios' extensively redesigned Nike's London headquarter including offices and showrooms in 2003 (Architectural Record, 2007). Moreover, Melewar et al (2006) refer to the golden arches or "M" of McDonalds as an excellent example of a consistent and expressive corporate architecture and Van den Bosch et al (2006b) refer to the distinctive architecture of Ikea that is mainly based on the combination of the dominant colours blue and yellow. Overall, various authors have acknowledged the importance of architecture by including corporate architecture and interior design into the corporate visual identity construct (Balmer, 1995; Dowling, 1994; Melewar et al, 2006; Melewar and Jenkins, 2002; Melewar and Karaosmanoglu, 2006; Melewar and Wooldridge, 2001; Schmitt and Simonson, 1997; Schmitt et al, 1995; Van den Bosch et al, 2006a).

Melewar et al (2006) for example include 'architecture and location' into the subcomponent 'communication and visual identity' of their corporate identity model. In a similar way, Schmidt (1995) refers to the importance of architecture by including it into the set of 'communications and design' as one dimension of corporate identity. Similarly, Melewar and Karaosmanoglu (2006) point out that besides the companies' products, vehicles and location, architecture also can express identity.

In a similar way, Olins (1990) argues that corporate identity in addition to product and services, communication and behaviour is reflected by what he calls

'environment'. Olins (1990:10) stresses the importance of such architectural environments by arguing that "*in any event, all organisations have offices, canteens, factories or other places in which they live and carry out their work, and these exercise a powerful influence on the way both employees and outsiders see the organisation*". Dowling (1994:125) supports this view and points out that "*the company's buildings, office decor, signage, stationery, uniforms, cars and trucks, can all play a part in helping stakeholders and others to identify the organisation*".

Besides the fact that many academics (e.g. Melewar et al, 2006; Melewar and Jenkins, 2002; Melewar and Wooldridge, 2001) have agreed on the importance of architecture, Melewar and Karaosmanoglu (2006) also have found evidence that managers perceive architecture as an important aspect of corporate visual identity. Finally, Schein (1999) argues that architecture reflects corporate culture as part of the 'artefacts', the most visible level of corporate culture.

So far, architecture and interior design predominantly have been considered from a visual perspective, which explains why these components have been included into the visual identity dimension by many academics (e.g. Balmer, 1995; Dowling, 1994; Lambert, 1989; Melewar et al, 2006; Melewar and Jenkins, 2002; Melewar and Karaosmanoglu, 2006; Schmidt, 1995; Van den Bosch et al, 2006a).

However, architecture provides a good example for taking a multi-sensory perspective. That is, architecture does not come on a simple two-dimensional visual level such as for instance stationery, print advertising, and brochures. In contrast, any type of architectural environment like offices and shops provide a three-dimensional way of experience for various kinds of stakeholders such as visitors, staff or customers. With the opportunity to walk through a building one can experience the structure of surfaces, sense the dimensions of a room or smell the particular scent of the interior as an immediate sensory experience. Thus, architecture with its different cues of perception provides an excellent example to illustrate the sensory diversity.

Drawing on the notion of Balmer (2001a) regarding the importance of other non-visual senses, which has been illustrated by the example of architecture, this research

takes the view, that the existing dominant visual perspective in academic literature, which is reflected by the corporate visual identity concept, is neither sufficient nor adequate, but points towards a lack in academic research. Therefore, owing to the criticised dominance and exclusiveness of the visual dimension, the following section proposes a more holistic sensory perspective.

1.1.2 The Sensory Identity Concept

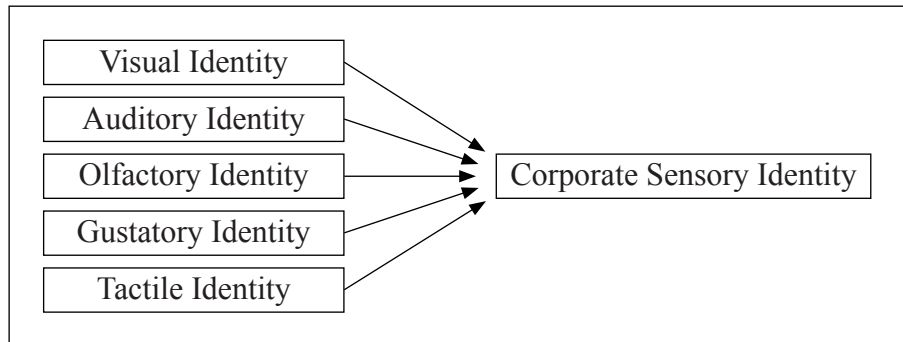
The concept of human senses can be linked to various research areas such as psychology, medicine, and biology leading to various definitions of sense. However, for the purpose of this research study, the researcher follows the definition of the Oxford Dictionary (2005:1608) where sense is defined as: “*a faculty by which the body perceives an external stimulus; one of the faculties of sight, smell, hearing, taste, and touch*”. This is in line with the notion of Pines (2007), pointing out that, human beings physiologically perceive their environment by means of the five senses: seeing, hearing, touching, smelling and tasting. Therefore, the sensory categorisation based on the five human ways of perception, namely visual (i.e. sight), olfactory (i.e. scent), auditory (i.e. sound), tactile (i.e. touch) and gustatory (i.e. taste) provides the theoretical foundation for the following conceptual construct.

Borrowing terminology from existing corporate identity and corporate visual identity literature (e.g. Baker and Balmer, 1997; Melewar, 2001; Van den Bosch et al, 2004), the term ‘corporate sensory identity’ is introduced to characterise the new construct. The term sensory identity previously has been used by some design agencies such as Lippincott (2007) in relation to their design consulting for companies such as Samsung and Hyatt Place. Based on this terminology, the five included constructs are named corporate visual identity, corporate auditory identity, corporate olfactory identity, corporate tactile identity and corporate gustatory identity (See Figure 1.1).

The key quality of the concept of corporate sensory identity lays in its ability to overcome the limited nature of visual identity by expanding the dimensions to all possible ways of stimuli and human perception. Consequently, corporate sensory

identity comprises each component and application related to the five sensory dimensions.

Figure 1.1 – The Corporate Sensory Identity Construct



Source: Bartholmé and Melewar (2009:164; 2011b:60)

Again, borrowing from the corporate visual identity literature the following definition is presented: “*Corporate sensory identity is an assembly of sensory cues by which an audience can recognize the company and distinguish it from others*” (Based and adapted from Melewar, 2003). Thus, corporate sensory identity stands for the entirety of sensory means by which any company or organisation can project its identity to all of its internal and external audiences. The next sections will unfold the five elements of corporate sensory identity in more detail.

1.1.3 Corporate Visual Identity

A review of the identity and marketing literature reveals that the visual dimension (i.e. corporate visual identity) is the most recognised sensory dimension. This can be explained by the fact that the visual sense is directly represented by the well-established construct of corporate visual identity or corporate design as a constituent of numerous corporate identity models (e.g. Melewar, 2003; Melewar and Jenkins, 2002; Melewar and Karaosmanoglu, 2006; Melewar and Wooldridge, 2001; Suvatjis and De Chernatony, 2005). Consequently, the visual dimension already has been conceptualised to a good degree by academics so far. In addition, visual applications such as advertisements and brochures are omnipresent in the real world.

1.1.4 Corporate Tactile Identity and Corporate Gustatory Identity

Literature review regarding the two sensory dimensions of touching (i.e. tactile) and tasting (i.e. gustatory) shows that these dimensions have only been the subjects of very limited research in the marketing and identity literature so far. Besides Balmer's (2001a) notion of touch and taste, Schmitt and Simonson (1997) provide some rare notion on touch and taste as part of their concept of marketing aesthetics. In terms of touch, Schmitt and Simonson (1997) argue that materials of products as well as print communications, office exteriors and interiors and company uniforms are important sources of identity. However, with very limited literature on tactile and gustatory perception with regard to corporate identity, these two sensory dimensions remain mainly absent within the identity domain.

In addition, a review of anecdotal literature (e.g. Lindstrom, 2005a) reveals that the two dimensions touch and taste have only been applied in an experimental and sporadic manner by companies so far. Lindstrom (2005a) for instance provides the example of Colgate, which has patented the taste of their toothpaste. Lindstrom (2005a) also points out that despite his opinion that 16 per cent of the Fortune 1000 brands could use some form of gustatory cues, almost none of them has done so. Therefore, not only academic literature but also the practical role of the two sensory dimensions of touch and taste are very limited until now.

1.1.5 Corporate Olfactory Identity

In contrast to the tactile and gustatory dimension, scent (i.e. the olfactory dimension) has been the topic of a number of academic research, mainly in a consumer behaviour context (e.g. Gulas and Bloch, 1995; Hirsch, 1995; Mattila and Wirtz, 2001; Spangenberg et al, 1996). According to this stream of research, scent can be differentiated along three dimensions, namely affective quality (how pleasant it is), its arousing nature, and its intensity (Mattila and Wirtz, 2001). The application of scent can be divided into two major categories. First, there is ambient scent, which is present in the environment, and second there is non-ambient scent that derives from an object (Mattila and Wirtz, 2001).

Spangenberg et al (1996) for instance examined ambient scent, showing that it positively effects evaluation and behaviour, leading to a subjective improved shopping experience. This is in line with Gulas and Bloch (1995:90) who define ambient scent as an “*environmental cue that influences emotional responses and ultimately shopping behaviours*” (Mattila and Wirtz, 2001:276).

Furthermore, various studies showed a range of relations between scented environments and time such as an increasing time spent in a shop (Spangenberg et al, 1996), increased time spent on catalogue shopping (Bone and Ellen, 1994), more time spent at slot machines (Hirsch, 1995). Overall, research suggests that scent can be used as a powerful means to induce positive evaluations of a store environment (Spangenberg et al, 1996). It can create a distinctive environment, which can be a source for differentiation and consequently can lead to competitive advantage (Spangenberg et al, 1996).

Moreover, ambient scent not only can influence the perception of a store but also of products that otherwise are difficult to smell (Mattila and Wirtz, 2001). Based on that viewpoint, cue congruency i.e. whether a scent is perceived as congruent or incongruent with the product, is important (Spangenberg et al, 1996). Despite some mixed results regarding cue congruency (Mattila and Wirtz, 2001) research indicates that inconsistency between scent and products tends to have negative effect on product evaluation (Bone and Jantrania, 1992; Ellen and Bone, 1998; Mitchell et al, 1995).

In addition, research exploring the relation between scent and other sensory stimuli has been conducted. Blackwell (1995) for example investigated the role of visual cues in relation to the identification of scent, showing that odour assessment is significantly influenced by visual cues. Interestingly, when there are conflicting visual and olfactory stimuli, visual cues seem to be more dominant, thus inhibiting correct olfactory judgment (Blackwell, 1995). Related to the question of sensory congruency, Mattila and Wirtz (2001) argue that the congruency of scent (in terms of arousing qualities) and sound are important as it positively effects the shopping environment and the buying experience.

Since research so far strongly has been focused on ambient scent, literature regarding the dimension of scent on a product or corporate level offers some paucity. However, anecdotal literature provides valuable examples to illustrate the role of scent on a product or corporate level. Lindstrom (2005b) for instance refers to the development of a particular aroma for Singapore Airlines, the customized new-car smells of Chrysler, Ford and Cadillac, and the scent of Crayola's crayons. Another example is the car manufacturer Fiat who offers a special olfactory experience. Customers buying the new Fiat 500 can order an electric scent dispenser, choosing from three different scents for the car interior (Richarz, 2007). However, according to Lindstrom (2005a) less than 3 per cent of the Fortune 1000 brands have considered scent as a distinctive way of self-presentation.

Research regarding scent to date has mainly been limited to the consumer behaviour domain with a focus on the retail sector (e.g. Bone and Ellen, 1994; Mattila and Wirtz, 2001; Spangenberg et al, 1996). Moreover, literature shows that research so far has been given little consideration to the role of scent as a means to convey corporate identity. That is, looking at the established corporate identity models (e.g. Melewar, 2003; Melewar and Jenkins, 2002; Melewar and Karaosmanoglu, 2006; Melewar and Wooldridge, 2001; Suvatjis and De Chernatony, 2005) reveals that scent has not been considered as part of the identity mix. However, based on the last section, there is a clear indication for the significance of the sensory dimensions of scent, which consequently supports the relevance of a holistic sensory perspective, which this research advocates and builds on.

1.1.6 Corporate Auditory Identity

The fifth sensory dimension as part of the sensory identity construct is auditory identity. Sound can emerge in various forms and shapes such as voice, music, background music, jingles, sonic logos or even basically as noise (Jackson, 2003; Treasure, 2007). A detailed review of the literature (See Chapter 2) shows that sound and music in particular have been linked to various aspects such as retail environment (e.g. Herrington and Capella, 1996; Mattila and Wirtz, 2001), online

stores (e.g. Fiore and Kelly, 2007), staff performance (e.g. Herrington and Capella, 1996), advertising (e.g. North et al, 2004; Zander, 2006), branding (e.g. Lindstrom, 2005a; 2005b; Park and Young, 1986) and corporate image formation (Schmitt et al, 1995).

Many studies so far have investigated the role of background music, showing for instance that background music is an important environmental stimulus (Milliman, 1982; 1986), that the tempo of music is influencing the emotional state (i.e., happiness or melancholy) of listeners (Bruner, 1990), that background music can decrease perceived waiting time (North and Hargreaves, 1999) or if background music is liked it can increase shopping time as well as expenditures (Herrington and Capella, 1996). However, by focusing on music, which is only one form of sound, and by accentuating the consumer behaviour domain, most of the research so far has neglected the role of sound in relation to aspects such as corporate identity and corporate image.

Anecdotal literature and practitioners however, provide examples of the auditory dimension on a corporate level (e.g. Fulberg, 2003; Jackson, 2003; Lindstrom, 2005a; 2005b; Treasure, 2007). The sonic logo of Intel[®] regularly is presented in order to illustrate the importance of corporate sound (Jackson, 2003). However, despite practical examples of sound applications, so far, the auditory dimension has not been incorporated by the established corporate identity models (e.g. Melewar, 2003; Melewar and Jenkins, 2002; Melewar and Karaosmanoglu, 2006; Melewar and Wooldridge, 2001; Suvatjis and De Chernatony, 2005), thus, auditory identity has not been conceptualised as an element of corporate identity in the identity literature.

So far in this chapter, each of the five sensory dimensions (i.e. visual, olfactory, auditory, tactile, and gustatory) has been conceptualised as an autonomous construct, jointly forming the collective corporate sensory identity construct, which addresses the call for a more holistic sensory perspective by academics and practitioners alike (Balmer, 2001a; Lindstrom, 2005a).

However, subsequent to the process of conceptualisation of a construct, the next step is to operationalise a construct, i.e. the measurement of the construct (Churchill, 1979). According to Gerbing and Anderson (1988:186) the reason for measurement basically is to offer “*empirical estimate of each theoretical construct of interest*”. Technically, measuring a construct refers to “*assigning numbers to objects to represent quantities of attributes*” (Nunnally, 1967:2). In order to assign such numbers, valid and reliable measurement scales have to be developed, which are then applied to a suitable sample within a defined unit of analysis (Churchill, 1979).

With regard to the process of operationalisation, taking the proposed five dimensions of the sensory identity construct, literature review indicates that except for visual identity, some of the other sensory dimensions have only been applied on an experimental level by companies so far. In particular, compared with the huge number of visual applications (e.g. brochures, stationery, advertisements), the use of tactile, olfactory, and gustatory stimuli is still in an experimental stage or applications are very limited to few companies and restricted to niche markets or niche products (Lindstrom, 2005a). Due to the limited applications of the olfactory, tactile, and gustatory dimension as a means to convey the identity of an organisation, there is a practical weakness of these three constructs regarding the process of operationalising. Based on that shortcoming, identifying appropriate and sufficient samples in order to measure the constructs is expected to be difficult, which would make an adequate operationalisation of these three constructs (i.e. of tactile, olfactory, and gustatory) unfeasible.

On the other hand, for auditory identity (i.e. sound) this appears not to be the case. Literature review indicates that sound does not seem to be restricted by the type of company or industry. In contrast, similar to visual identity, the auditory dimension seems to have a generic quality, since in principle each organisation can utilise sound in some way (e.g. website, radio advertising, in-store audio, telephone on-hold) (Jackson, 2003). Consequently, numerous companies from different industries have already applied auditory identity and various well-known examples can be found such as the sonic logos of Intel[®] or the Microsoft[®] Windows start-up sound (Jackson, 2003; Lindstrom, 2005a). Moreover, agencies that work exclusively with sound such

as the London based agencies Cutting Edge Commercial (2010) and The Sound Agency (2007) have been set up, reflecting the widespread presence of sound in the business environment. Overall, anecdotal literature (e.g. Fulberg, 2003; Jackson, 2003; Lindstrom, 2005a; Treasure, 2007) shows that corporate auditory identity already has been broadly applied by numerous companies. Thus, auditory identity can be considered as the second most developed dimension (i.e. besides corporate visual identity) as part of the sensory identity construct. Therefore, based on a relatively wide application of sound in business environment, a practical consequence is that an adequate accessibility of sample subjects can be expected, which in turn makes the operationalisation of the auditory construct (i.e. measuring the construct) reasonable and feasible.

What is more, literature review shows that although academic literature in the area of sound is still limited in comparison to the visual identity literature, it provides various streams of research (See Chapter 2) and can offer a reasonable foundation for this research. Consequently, drawing on the presented rationale, the auditory dimension (i.e. corporate auditory identity) as part of the proposed sensory concept has emerged as the focal construct of this research.

1.2 Problem Discussion

The early perspective of corporate identity as the visual expression of an organisation has gradually changed over time towards a more multi-faceted perspective of corporate identity including all expressions of a company (Baker and Balmer, 1997; Cornelissen and Harris, 2001). However, corporate visual identity, which constitutes the corporate identity mix together with behaviour and communication (Birkigt and Stadler, 1986), still is perceived to be a crucial element of the identity mix (Baker and Balmer, 1997) and plays an important role in transmitting the central, distinctive and enduring characteristics of a company (i.e. the identity) to internal as well as external stakeholders (Dowling, 1994; Van den Bosch et al, 2006b; Van Riel and Balmer, 1997; Van Riel et al, 2001). Abratt (1989:69) supports this view by stating that visual identity is “*the outward sign of the inward commitment*”.

According to Baker and Balmer (1997), the main objective of managing corporate identity through planned communication activities (Gray and Smeltzer, 1985) is to acquire a favourable corporate image. Melewar and Saunders (1998:291) point out that corporate visual identity is “*at the centre of a business’s projected image*” and Van Heerden and Puth (1995:16) argue that a corporate logo “*can create measurable images in the minds of respondents*”. This is in line with Henderson and Cote (1998) claiming that the emotional appeal of a visual logo is linked to a more positive evaluation of the company. In other words, a positively perceived corporate visual identity contributes to the formation of a favourable corporate image.

More important, Gray and Balmer (1998:699) support a holistic perspective regarding the various means of conveying the identity of an organisation, arguing that “*the methods and channels of corporate communication should be defined in the broadest possible sense because stakeholders are influenced in many different ways*”. This view in essence supports the proposition of the sensory identity concept as well as the need for examining auditory identity as an additional element of corporate communication. In addition, the holistic sensory perspective and the focus on the auditory dimension in particular are supported by the integrated communication paradigm (See Chapter 2), which advocates the effective integration of all communication efforts of an organisation (Bernstein, 1984; Bick et al, 2003; Simões et al, 2005).

In addition to the notion of academics and practitioners such as Balmer (2001a) and Lindstrom (2005a) who acknowledge the role of additional sensory cues such as sound with regard to corporate communication, this research in particular draws on similarities between visual identity and auditory identity (Jackson, 2003). The generic similarity between the two concepts is supported by Fraedrich and King (1998:134) who stress that “*sounds can become as familiar and representative to an audience as their visual brand logo counterparts*”.

Consequently, based on the holistic sensory perspective (Balmer, 2001a; Lindstrom, 2005a; Schmitt and Simonson, 1997) and more importantly, based on the proposed parallel of visual and auditory cues (Fraedrich and King, 1998) this research

investigates the role of corporate auditory identity at a corporate level. In detail, this research examines determinants of corporate auditory identity management and in addition investigates the consequences of corporate auditory identity management as perceived by companies.

In the next sections the following contents are presented. First, the relevance of this research study is presented (Section 1.3), followed by the aims of this study, the research objectives and research questions (Section 1.4). Then, the context of the study and the target population for data collection is outlined (Section 1.5). Next, the way the study was conducted including statistical methods is described (Section 1.6). Subsequently, the contributions of this research are discussed (Section 1.7) and finally the structure of this thesis is outlined (Section 1.8).

1.3 Relevance of this Research

Academic research has put forward considerable evidence for the significance of sound (e.g. Bruner, 1990; Milliman, 1982; 1986). For instance, background music has been linked to customers' purchasing behaviour (Herrington and Capella, 1996) or the increase of accepted on-hold waiting time (North et al, 1999). Moreover, anecdotal literature provides numerous examples of the auditory dimension on a corporate level such as the sonic logo of Intel[®] (Jackson, 2003; Lindstrom, 2005a; Treasure, 2007), thus demonstrating the significant role of sound in the business environment.

However, with academic research mainly focusing on consumer behaviour so far, there is still a lack of research regarding the role of sound on a corporate level. In particular, the auditory dimension has not been sufficiently conceptualised as a company-controlled communicator of corporate identity in the corporate identity and corporate image literature. That is, sound has been ignored as a possible dimension of the corporate identity mix so far (c.f. Birkigt and Stadler, 1986; Schmidt, 1995), which is reflected by the fact that corporate identity models almost exclusively take a visual perspective within the communication dimension (e.g. advertisement) and the design dimension (e.g. visual logo). Consequently, there is still conceptual paucity in

terms of the integration of the auditory dimension (and other non-visual sensory elements) into the corporate identity mix, despite the notion of sound as a meaningful element of corporate identity (Balmer, 2001a; Schmitt and Simonson, 1997). Moreover, because of the lack of conceptual consideration of auditory identity in identity literature so far, measurement scales to operationalise the auditory dimension are absent. Overall, the existing corporate identity models fail to reflect present business reality that offers a variety of auditory examples (e.g. the Intel[®] sound logo) (Jackson, 2003; Lindstrom, 2005a; 2005b; Treasure, 2007).

In addition, this research gains its relevance from the role of sound in relation to corporate identity management and corporate image formation. Van Heerden and Puth (1995) pointed out that a well-designed corporate image programme could lead to increased individuality and awareness of the company, and companies with high visibility gain competitive advantage (Balmer and Gray, 1999). Moreover, the statement on corporate identity by the International Corporate Identity Group (i.e. the Strathclyde Statement presented on page 78), indicates that the management of corporate identity is related to achieving differentiation in a competitive environment (Balmer, 2001a). Overall, the management of corporate identity through company-controlled communication activities aims to improve corporate image (Baker and Balmer, 1997; Gray and Smeltzer, 1985). Drawing on the importance of corporate identity management as a means to achieve for instance a positive corporate image, the investigation of possible additional elements of the corporate identity mix becomes crucial. Therefore, better understanding auditory identity as an additional element of company-controlled communication within the corporate identity mix is imperative.

1.4 Research Aim and Research Questions

The identity literature suggests that visual cues have played a crucial role over the last decades for companies to differentiate from competitors in order to develop a distinctive corporate image (Balmer and Gray, 1999). Companies generally employ various ways of corporate and marketing communication and aspire to disseminate consistent and congruent messages to all audiences (cf. integrated communication

paradigm) (Bick et al, 2003). Based on the importance of corporate communication, which covers a variety of communication activities and with particular regard to the auditory dimension as an additional way of communicating the identity of an organisation, this research has the following research aims.

Firstly, this research aims to widen the academic perspective and to develop further knowledge in the corporate communication and corporate identity field. In other words, the aim of this research is to explore the auditory dimension (i.e. corporate auditory identity) as one constituent of the corporate identity mix alongside visual identity.

Secondly, this research aims to provide a valid conceptualisation of corporate auditory identity management, which is the focal construct of this research. In addition, this research consequently aims to develop reliable and valid measurement scales in order to operationalise corporate auditory identity management.

Thirdly, this research aims to develop a process model that explains determinants of corporate auditory identity management applied by an organisation and reveals the consequences of corporate auditory identity management as perceived by the company. Moreover, the developed measurement scales as well as the proposed process framework will be empirically tested. Based on the demonstrated rationale and research aims, the following research questions are presented.

RQ 1: What elements can qualify as determinants of corporate auditory identity?

RQ 2: What factors determine corporate auditory identity management?

RQ 3: What are the consequences of corporate auditory identity management as perceived by companies?

In order to answer each of the presented research question, the following key steps were completed: First, the constructs of corporate auditory identity and corporate auditory identity management are conceptualised based on literature review and

qualitative data (i.e. in-depth interviews). Next, in order to operationalise the focal construct (i.e. corporate auditory identity management) as well as all other variables of the conceptual research framework, appropriate measurement scales were developed and tested regarding reliability and validity. Finally, the structural model representing the hypothesised relations between corporate auditory identity management and the antecedents and perceived consequences were empirically tested based on quantitative data.

1.5 Unit of Analysis and Research Context

This research investigates the determinants of corporate auditory identity management and the consequences of corporate auditory identity management as perceived by companies. Consequently, the unit of analysis in this research is the organisation.

With regard to the country where the research was conducted, the study was carried out in the United Kingdom, thus gathering primary quantitative data from UK-based companies. The rationale for focusing on the United Kingdom is as following. The United Kingdom provides a well-established western-European business environment with companies that have appropriate knowledge and capabilities in corporate and marketing communication, which, for instance, is reflected by the annual turnover of £ 4.4 billion in 2007/08 of the UK design industry industry (The British Design Industry, 2008). In other words, with companies that operate in a business environment in which corporate communication issues are an integral part, it is assumed to obtain valid information in the qualitative as well as the quantitative phase of this research.

Moreover, many of the measurement scales, that measure constructs that are linked to corporate identity and visual identity have been developed for western-oriented countries such as the Netherlands (Van den Bosch et al, 2004; 2006a; Van den Bosch et al, 2006b) or the United Kingdom (Melewar and Saunders, 1998; 1999; 2000; Melewar et al, 2001; Simões et al, 2005). Bearing in mind that this research is entering a rather underdeveloped research area (i.e. corporate auditory identity

management), it is considered by the researcher to be imperative to build on measurement scales that have already been tested in terms of reliability and validity in comparable western-oriented settings (Malhotra et al, 1996; Netemeyer et al, 1991).

With regard to the industry context, this research strongly builds on findings from the qualitative data (Please see Chapter 4.5 on page 171). That is, several interviewees from multinational companies as well as design and branding agencies based in the UK London area have suggested that auditory identity currently is more established in particular industries such as in the media industry, including companies such as mobile phone networks, cinemas, broadcasting companies and IT companies. Consequently, in order to enable the collection of relevant data, this research is placed in the media, information and communication as well as the banking and finance industry. The rationale for the selection of specific industries is presented in more detail in Chapter 4.

1.6 Research Methodology and Methods

This research aims to investigate the factors that determine corporate auditory identity management at an organisational level and to examine the consequences of corporate auditory identity management as perceived by companies. Since this is a relatively underdeveloped research area, the descriptive nature of this research is acknowledged by firstly taking an exploratory approach (Hussey and Hussey, 1997), which incorporates in-depth interviews in order to gain insights into the subject (Churchill, 1979; Dodd and Whipple, 1976).

Overall, this research widely adopts the proposed procedure by Churchill (1979) which recommends gathering qualitative data at the early stage of the research, which can increase the validity of the research as well as being beneficial regarding the succeeding interpretation of quantitative data (Cronbach, 1975; Deshpande, 1983). Accordingly, after a review of the literature, in-depth interviews were conducted with experts in the field (e.g. identity consultants and marketing

managers) in order to gain insight information, which were incorporated into the development of the process framework.

Moreover, the development and purification of measurement scales was done by qualitative as well as quantitative methods. Regarding qualitative methods, information gathered through in-depth interviews with experts as well as examination by academics was used to ensure content validity of the scales (i.e. items of the questionnaire) (DeVellis, 2003).

Moreover, exploratory factor analysis (EFA) and statistical reliability tests were used to simplify and purify the indicators of the proposed relational framework quantitatively (Hair et al, 2007). Subsequently, in order to test proposed causal relations between constructs, a two-step procedure was applied. First, the measurement model that depicts the relation between observable indicator variables and the latent variables (factors) was assessed using Partial Least Squares Structural Equating Modeling (PLS-SEM). This was followed by the assessment of the structural model, which refers to the path relations between exogenous and endogenous latent variables (Anderson and Gerbing, 1988; Tabachnick and Fidell, 2007) also using PLS-SEM. As an ultimate result of this second step, statistically significant hypothesised relations between constructs were identified (Anderson and Gerbing, 1988; Reynolds et al, 1994).

In order to conduct the above-mentioned steps, the following software packages were used. The NVivo 7.0 software package was used to code and analyse the qualitative data from the interviews. The IBM SPSS 19 (Statistical Package for Social Science) software package was used for descriptive analysis, the analysis of outliers and missing data, exploratory factor analysis (EFA), reliability test and normal distribution assessment. The SmartPLS 2.0 software package was used for the assessment of the measurement model as well as the structural model, which includes the testing of hypotheses.

1.7 Contributions of this Study

This research aims to expand existing knowledge in the corporate identity management, corporate image and corporate communication literature. It intends to contribute to theoretical knowledge in two main areas, namely, by conceptualisation and operationalisation of constructs and by empirically testing of conceptualisations. In addition, this research aims to offer managerial implications for decision-makers regarding the use of auditory identity as an additional communication activity as part of corporate identity management.

1.7.1 Academic Contributions

This research contributes to the theoretical knowledge by adding the auditory dimension to existing corporate identity models (e.g. Melewar, 2003; Melewar and Jenkins, 2002; Melewar and Karaosmanoglu, 2006; Melewar and Wooldridge, 2001; Suvatjjs and De Chernatony, 2005) and the corporate identity mix (Balmer and Soenen, 1999; Birkigt and Stadler, 1986; Schmidt, 1995) which contributes towards a more holistic corporate identity mix.

Moreover, the examination of the auditory dimension provides a decisive step in order to unlock existing constructs for future integrations of additional sensory dimensions. By putting emphasis on auditory identity, this research does not question the significance of existing definitions of the corporate identity mix (Balmer and Soenen, 1999; Birkigt and Stadler, 1986; Schmidt, 1995). However, the conceptualisation of auditory identity as an additional element of corporate identity management alongside visual identity intends to vanquish the criticised predominance of the visual perspective (Balmer, 2001a), hence advancing the possibilities of corporate identity management.

In addition, since this research examines auditory identity as an element of company-controlled communication, it expands the understanding of orchestrating the elements that convey corporate identity. Consequently, this research advances the integrated communication paradigm, which advocates the need for consistent and

congruent messages through all communication channels (Abratt, 1989; Balmer and Gray, 1999; Bernstein, 1984; Simões et al, 2005; Van Riel, 1995).

Furthermore, this research offers measurement scales in order to operationalise the auditory identity construct. Owing to the fact that the auditory dimension still represents a rather underdeveloped research area in identity literature, the development of measurement scales offers initial insights into the role of auditory identity as part of corporate identity management. In addition, this research empirically verifies the conceptualisation and operationalisation of the corporate auditory identity construct. Finally, the measurement scales that were developed in order to operationalise the auditory identity construct constitute a foundation that will foster further research in this area.

1.7.2 Managerial Contributions

With regard to managerial implications, this research provides practical implications for managers and decision-makers regarding the auditory dimension as an additional aspect of corporate identity management. In particular, the findings of this research provide managers with insights regarding the utilisation of auditory elements and applications that will offer managers additional ways of conveying the identity of their organisation.

Moreover, with an ever-growing number of aspects that managers need to take into consideration when managing the identity of an organisation (auditory identity being one example), managers are faced with increasing complexity. This research provides some help to better manage such complexity in a sense that it offers clarification on the subject of auditory identity through definitions and empirical findings and thus reduces some of the ambiguity regarding auditory identity.

In addition, based on the wide support of a conceptual similarity between visual identity and auditory identity as showed in this study, concepts of visual identity management that are already applied by managers can offer a good guidance for managers when dealing with auditory identity. In other words, managers are advised

to build on their knowledge about visual identity to guide them when addressing auditory identity.

Furthermore, strongly based on the integrated communication paradigm (Beard, 1997; Phelps et al, 1996), findings of this research emphasise that failing to align auditory identity with corporate identity and visual identity in particular leads to inconsistency in the various communication channels. With many managers so far being little aware of the various auditory applications and elements (sonic touchpoints) (Jackson, 2003) that already exist in an organisation (e.g. telephone on hold), misalignment of for instance visual and auditory messages frequently are overlooked. The findings of this research strongly encourage managers to take on board corporate auditory identity management as part of the overall communication activities.

Overall, this research contributes towards a more holistic perspective regarding company-controlled communication as a means to convey the identity of an organisation.

1.8 Structure of this Thesis

This thesis consists of seven chapters along with references and appendices. In detail, this thesis has the following structure:

Chapter 1 – Introduction: The first chapter presents the background and scope of the study, the relevance and aims of the study. In addition, the applied research methodology and the context and unit of analysis of the study as well as the contribution of the study are briefly outlined.

Chapter 2 – Literature Review: The second chapter presents a review of key literature, which is relevant for this research. In detail, concepts, paradigms and models in the area of sound (corporate auditory identity), corporate identity, corporate image and corporate communication are presented.

Chapter 3 – Conceptual Framework: In this chapter, the theoretical framework linking the key constructs is presented. In addition, this chapter presents the resulting hypothesised relations of the framework.

Chapter 4 – Research Methodology and Method: This chapter provides rationale for the adopted methodology and the methods chosen to collect the data. In addition, this chapter presents the data analysis techniques and the statistical software packages used in this study.

Chapter 5 – Analysis and Findings: This chapter presents the analysis and key findings of the main survey. In detail, this chapter includes the data analysis, procedures of validation of constructs as well as the testing of the process model.

Chapter 6 – Results and Discussion: In this chapter, the outcomes of the research are presented in more detail and the linkages between literature and the outcomes are discussed.

Chapter 7 – Conclusion: The final chapter presents the contribution of the study to the theory as well as to the practical dimension. Additionally, limitations of the study are presented. Moreover, suggestions for future research are provided. Finally, appendices and references follow this chapter.

2. Literature Review

2.1 Introduction

Research on sound and music over the last few decades has put forward evidence that various factors of sound such as the right tempo and volume can influence the mood and emotion of consumers (Bruner, 1990) and affects purchasing behaviour (Milliman, 1982; Yalch and Spangenberg, 1990) which can lead to increased sales (Alpert and Alpert, 1990). The branding literature adds to the general view about sound by referring to music as a means to make service brands more tangible (McDonald et al, 2001). Despite such research, little attention has been given to the auditory dimension (i.e. auditory identity) as part of the corporate identity mix (cf. Balmer and Soenen, 1997; 1999; Birkigt and Stadler, 1986; Schmidt, 1995). However, since managing corporate identity plays an important role in developing a favourable corporate image (Gray and Balmer, 1998), examining the role of auditory identity as a new dimension of the corporate identity mix, can provide valuable knowledge regarding its use as an additional company-controlled communicator.

The aim of this literature review is multifaceted. Firstly, it intends to identify relevant authors and related concepts and paradigms, thereby revealing how knowledge on the subject topics are structured and organised. In addition, the aim is to display existing definitions and taxonomies. Moreover, reviewing the literature offers insight into past and ongoing discussions and debates in the field, leading to the identification of research questions that have been addressed by academics so far. Finally, the aim of the literature review is to identify the appropriate and relevant perspectives and lenses for this particular research study.

For that reason, this chapter reviews a wide range of literature in order to establish the two key domains of this research, namely sound (i.e. auditory identity) and corporate identity including the related topic of corporate image.

Firstly, this chapter reviews literature on sound, in order to reveal the dimensions of sound related to various streams of research and to examine different perspectives on the relation between sound and corporate identity.

The second part of this chapter then unfolds the corporate identity construct, presenting various streams of research and different schools of thoughts. Moreover, concepts related to corporate identity such as corporate image will be discussed in order to provide a more comprehensive picture of the research domain.

2.2 The Auditory Dimension

At the beginning of this investigation of the dimension of sound, the definition of sound provided by the Oxford Dictionary (2005:1690) reveals a broad perspective, namely that sound is defined as “*vibrations which travel through the air or another medium and can be heard when they reach a person’s or animal’s ear*” and “*a thing that can be heard*”. Taking this generic definition of sound, it is apparent that the auditory dimension offers a variety of elements and applications and that a more detailed categorisation of sound is required.

2.2.1 Categorisations of Sound

Sound has been categorised in different basic ways. Jackson (2003) for instance subdivides sound into three basic elements of voice, ambience and music. Treasure (2007) in contrast presents five categories of sound namely human voice, music, natural sound (e.g. wind, water, and birdsong), noise and sound of silence. Despite the more detailed categorisation of Treasure (2007), both categorisations show a strong congruency regarding three key categories namely voice, music and ambient sound. However, the categorisations provided by Jackson (2003) and Treasure (2007) of the auditory dimension do not take into consideration the particular differentiation between elements and applications of sound.

Academic literature in the field of corporate visual identity (i.e. corporate design, symbolism) has distinguished the visual dimension along the two basic categories of

‘elements’ and ‘applications’ (e.g. Baker and Balmer, 1997; Melewar, 2003; Van den Bosch et al, 2006b). Regarding elements, literature mostly agrees that corporate visual identity is composed of five key elements: corporate name, symbol or logotype, typography, colour and slogan (e.g. Dowling, 1994; Henrion and Parkin, 1967; Melewar and Akel, 2005; Melewar and Saunders, 1999; 2000; Topalian, 1984). Regarding applications of corporate visual identity, many examples have been put forward by academics such as stationery, brochures, leaflets, uniforms, badges, ties, scarves, t-shirts, key fobs, bookmarks, signage, certifications, publications, videos, TV studios, exhibition boards, buildings, architecture, furniture, advertisements, vehicles, websites and corporate clothing (Baker and Balmer, 1997; Melewar and Saunders, 2000; Van den Bosch et al, 2006a).

Drawing on the visual identity categorisation (i.e. elements and applications), current literature on sound provides little insights. Jackson (2003) refers to the various situations where consumers can encounter with any type of sound and proposes the following fourteen sonic brand touchpoints: desktop, conferences, offices, web, CD-ROM, events, corporate film, parties, retail, cinema, IVR (interactive voice recognition), TV, radio, telephone hold. Jackson (2003) also refers to three components of the auditory dimension, namely, sonic language, sonic logo and guidelines. Although both lists provide some insight into the variety of the auditory dimension, the proposed concept of touchpoints and components does not follow a strict element and application categorisation.

Treasure (2007) provides the following list of drivers and expressions of sound: audio brand guidelines, brand voice, brand music, sonic logo, product sound, advertising sound, soundscapes in spaces, and sound on the telephone. Similar to Jackson’s (2003) list of touchpoints, Treasure (2007) also does not clearly categorise sound along the two dimensions of element and application.

Another type of categorisation of sound can be found in a study by Fiore and Kelly (2007), looking at the use of sound on retail websites. Fiore and Kelly (2007) categorise sound along the following three types: the sound a product makes, the noise in an environment, and a conversation. This categorisation shows some

congruency with the key categorisations of voice, music, and ambient sound by Jackson (2003) and Treasure (2007). That is, the category of ‘conversation’ could be linked to ‘voice’, and ‘noise in an environment’ could be linked to ‘ambient sound’. However, the category ‘the sound a product makes’ does not fit, since it could cover voice, music, or ambient sound.

Apart from the three categories, Fiore and Kelly (2007) also put forward two types of how sound is used in online stores. Firstly, they relate sound to its role of helping to better understand the product (i.e. sound related to product characteristic). Secondly, Fiore and Kelly (2007) relate sound to its role of achieving a positive consumer attitude towards the product or service (i.e. ambient or atmospheric sound), which can be linked to various studies of non-behavioural issues (e.g. Alpert and Alpert, 1990; Park and Young, 1986; Sewall and Sarel, 1986), presented later in this chapter.

However, Fiore and Kelly (2007) interestingly did not define a category for the distinctive element of sonic logo. In contrast, the study did not mention corporate sonic logos at all. Nevertheless, since a sonic logo does not fall into the first category (i.e. sound related to product characteristic) the authors might have included sonic logos into the second category of ambient or atmospheric sound. However, since sonic logos generally are played only once when entering the website it appears that sonic logos have not been part of the study by Fiore and Kelly (2007).

Since the auditory dimension, especially on a corporate level, covers a relatively new field, there is still paucity of academic literature. Consequently, examining the work of practitioners offers further insight to the subject, in order to reveal the dimension of sound in general and the categorisation of elements and application in particular. Various traditional design and advertising agencies like for instance MetaDesign (2010) the leading German corporate design agency (PAGE, 2007), already have established expert units dealing with the auditory dimension. In addition, there are agencies that exclusively focus on the dimension of sound such as the London based agencies Cutting Edge Commercial (2010) and The Sound Agency (2007). Examining the categorisation of sound of expert agencies provides a rather inconsistent picture of the subject.

MetaDesign (2010) for instance defines sound logo, soundscape, corporate music and corporate voice as the basic elements of the auditory dimension: “*The basic elements of corporate sound: The sound logo is the most prominent element of corporate sound. Soundscape refers to a total acoustic environment, in all its diversity. Corporate music is music strategically composed for a brand. Corporate voice is the voice through which a brand speaks*” (MetaDesign, 2010).

The sonic branding agency Cutting Edge Commercial (2010) does not directly refer to any type of elements or application, but rather define sonic branding as “*a brand's relationship with its audiences through their ears*”. Moreover, Cutting Edge Commercial (2010) describes their work as specialising in “*guidelines for global brands, the creation of sonic identities from logos to anthems and audio asset valuations*”.

The Sound Agency (2007), which is another agency exclusively specialised on sound, proposes a model (“BrandSound™ model”) which includes the following eight key elements related to the auditory expressions of a brand: “*audio brand guidelines, brand voice, brand music, sonic logo, advertising sound, product sound, soundscapes, telephone sound*”. However, this model also does not provide a clear distinction between elements and applications of sound but rather randomly summarises various facets related to the auditory dimension. Similarly, the Canadian sound agency Boom (2007) broadly refer to a variety of touch points where auditory applications can be heard, “*from broadcast media to web-based communications, from the retail environment to custom cell phone rings*”.

A review of academic and anecdotal literature as well as the work of agencies shows that no clear terminology or categorisation exists, neither regarding auditory elements (auditory cues) nor auditory applications (Bronner, 2007). However, some evidence can be found for the role of the sonic logo as a key element of the auditory dimension since most of the sources explicitly refer to the sonic logo or sound logo (Jackson, 2003; MetaDesign, 2010; The Sound Agency, 2007; Treasure, 2007). Notably, Jackson (2003:9) clearly distinguishes between a jingle and a sonic logo, by

defining a jingle as “*a short slogan, verse or tune designed to be easily remembered*” and by pointing out that “*jingles are for remembering whereas sonic logos convey associations*”.

The following sections depict the various streams of research on sound to gain further insight into the auditory dimension.

2.2.2 Streams of Research in the Auditory Domain

Sound has been the subject of various disciplines such as consumer behaviour (Herrington and Capella, 1996; Milliman, 1982; Yalch and Spangenberg, 1990), branding (Park and Young, 1986), or advertisement (North et al, 2004). A review of the literature reveals that the most prevalent form of sound is music. In particular, background music has been identified as one of the most significant environmental stimuli to which a customer can be exposed (Milliman, 1982; 1986). That is, music has been the subject of numerous studies, with a strong dominance in the consumer behaviour discipline (e.g. Alpert and Alpert, 1990; Bruner, 1990; Herrington and Capella, 1994; 1996; Yalch and Spangenberg, 1990).

2.2.3 Music and Emotion

Some of the early research on music investigated its effects on mood and emotions. Researchers have investigated music in relation to various variables such as time, pitch and texture (Bruner, 1990).¹ For instance, research by Hevner (1937), Rigg (1940b), Scherer and Oshinsky (1977), Swanwick (1973), Watson (1942) and Wedin (1972) regarding time showed that fast music is considered as more happy whereas slow music generally evoked sad emotions (Bruner, 1990). In addition, Hevner (1937), Rigg (1940a) and Watson (1942) presented evidence that high-pitched music is linked to happiness whereas low pitched music is linked to sadness (Bruner, 1990). Moreover, Hevner (1935a) and Scherer and Oshinsky (1977) have attributed music in major mode to happy and bright qualities in contrast to the minor mode, which was linked to angry, sad, or mysterious (Bruner, 1990; Coloma and Kleiner, 2005).

¹ According to Bruner (1990) texture includes timbre, orchestration and volume.

Regarding the volume of music, Bruner (1990) refers to research findings that link loud music to attributes such as triumphant, animated, happy or exiting and soft pieces to delicate, tranquil, peaceful and serious.

Besides studies of emotional effects, marketing-related research also has investigated non-behavioural issues (e.g. changes in affect, purchase intention and recall) and behavioural issues (e.g. product selection, shopping time) (Bruner, 1990).

2.2.4 Music and Attitude Formation

Wintle (1978) for instance demonstrated that music can have a significant effect on the emotional response to TV commercials, by showing that supporting music intensifies the positive characteristics of the commercial (Bruner, 1990). A study by Park and Young (1986), which investigated the role of background music regarding brand attitude formation depending on different types of involvement (high cognitive, high affective or low involvement), showed that people with low involvement are positively affected in their brand attitude formation by background music whereas people with high cognitive involvement are negatively affected (Bruner, 1990). Alpert and Alpert (1990) investigated music in relation to mood and purchase intention, showing in their study that sad music was found to lead to the highest purchase intentions (Bruner, 1990).

The role of music also has been investigated in the field of marketing communication, for example in relation to radio advertisement. Stout and Leckenby (1988) showed that TV advertisements using music in major or mixed mode have beneficial outcomes such as that people developed better relations towards the advertisement, showed more behavioural intention and learned more from them (Bruner, 1990). In contrast, advertisements using minor mode were perceived less positive and considered as irritating (Bruner, 1990). In addition, Stout and Leckenby (1988) showed that faster music was perceived as positive whereas moderate or slower music was perceived less favourable.

However, studies regarding the role of music in radio advertising produced inconsistent findings (Bruner, 1990). Whereas Sewall and Sarel (1986) showed that music in radio advertisements had no significant effect on recall, Hunt (1988) on the contrary claimed that music in radio advertisements is positively related to higher recalls. Another study on radio advertising was conducted by North et al (2004) showing that music fit and voice fit both provide benefits in radio advertising for high-involvement as well as low-involvement listeners. The researchers showed that music and voice fit increases recall of information provided in the advertisement, can enhance the liking of the advertisement, and has positive effects on the likelihood of purchasing the product. In a more recent study on auditory fit Lavack et al (2008) investigate the role of brand-congruent music in radio commercials in relation to the attitude towards the brand and towards the advert. Results suggest that particularly for radio adverts with high-cognitive copy, music that is perceived by the listener to fit with the brand has a positive effect on the attitude towards the advert as well as towards the brand.

2.2.5 Music and Behaviour

Besides such non-behavioural studies, a number of studies investigating consumer behaviour were conducted. A study by Smith and Curnow (1966) set in a retail environment showed that the volume of music was negatively affecting shopping time, however did not affect sales per person. Consequently, sales per minute were considerably higher under the condition of loud music (Bruner, 1990). Milliman (1982; 1986) also conducted surveys in retail environments, investigating the effect of tempo. The first study (Milliman, 1982) in a supermarket indicated that in-store traffic was considerably slower with slow music than with faster music and that sales volume was higher with slow music (Bruner, 1990). In line with the first study, the second study (Milliman, 1986) in a restaurant revealed that people took more time for their meals in a slow-music condition.

Referring to the work of Milliman (1982; 1986), Yalch and Spangenberg (1990) investigated the role of different types of music, namely foreground music (Top 40), background music (instrumental easy listening music) and absence of music in a

department store. Results suggest that customers under the age of 25 perceived to have spent more time in the instrumental condition, whereas older customers perceived to have spent more time in the Top 40 condition, leading the researchers to assume that unfamiliar music leads to the perception that time slows down (Bruner, 1990).

Another study also investigating the aspect of familiarity by Herrington and Capella (1996) provided evidence that not tempo and volume but the shoppers' preference for the background music is affecting shopping behaviour. In their study, shopping time as well as expenditures increased when favoured background music instead of disliked background music was played (1996). Bruner (1990) however proposed that familiarity of music to the listener as well as music enjoyment and prior mood are possible moderating variables.

Mattila and Wirtz (2001) have advanced the topic by investigating the role of congruency in terms of arousing qualities of ambient scent and sound in contrast to inconsistent environmental cues in a retail environment. The research showed that scent and music congruency has a positive effect on the perception of the environment, on approach and impulse buying behaviours, and on customer satisfaction (Mattila and Wirtz, 2001). They summarised that "*it is the total configuration of cues that influence consumer responses*" (Mattila and Wirtz, 2001:285).

To sum up, numerous studies have shown the multifaceted aspects of music. In particular, research indicates that music can strongly influence emotion and mood, attitude formation and behavioural responses (Bruner, 1990). Moreover, moderating variables such as familiarity of music and prior mood have been put forward and linkages between music and other sensory dimensions such as scent have been shown to be relevant.

2.2.6 Sound and Branding, Corporate Identity and Corporate Image

Sound and music in particular also have been of interest by academics in the branding area. One of the terminologies related to the use of sound in the marketing and branding discipline is ‘sonic branding’ (Fulberg, 2003; Jackson, 2003; Treasure, 2007). Sonic branding is defined by the Macmillan English Dictionary “...*the use of a special sound to identify and advertise products associated with a particular manufacturer*” (Macmillan English Dictionary, 2010). According to Jackson (2003:9) sonic branding, consist of two key aspects, namely “*the creation of brand expression in sound and the consistent, strategic usage of these properties across touch points*”.

Music has been identified as one “*brand signifier*” among others (e.g. name, logo, colours), which is not easy to imitate because music often is patented (Balmer and Gray, 2003:989). Music is considered to be beneficial particularly for service brands since music can play an important role to make service brands more tangible for example by playing music when customers are waiting on the telephone (McDonald et al, 2001). In addition, using the same music for as many applications as possible such as waiting time on the telephone, TV and radio advertisement, provides a chance to generate a holistic and consistent perception among customers (McDonald et al, 2001). Another example is the sound strategy of Starbucks where the sound experience once more comes in form of background music and was designed to fit and to reinforce the particular brand values of Starbucks (Simmons, 2005).

Besides considerable research on sound linked to attitude and behaviour and some notion of sound in the branding area, literature on sound in the field of corporate identity and corporate image is rare. However, Schmitt et al (1995) provide the framework of the ‘four Ps of aesthetics management’ namely properties, products, presentations, and publications, as key components of corporate image management. By including background music into the presentation category, Schmitt et al (1995) directly link background music to the management of corporate image. Schmitt and Simonson (1997) subsequently see sound, mainly in form of background sounds and music, as an element that can create identity. Schmitt and Simonson (1997) argue

that sound is easy to change which makes it a flexible and low-cost element to enhance identity. Jackson (2003) supports this view, arguing that sonic branding can be easily changed in comparison to visual identity and refers to the example of Intel[®] which has changed the arrangement of the sonic logo several times, yet keeping its distinct melody.

Literature review reveals that sound with regard to its role for corporate identity still is in its infancy. Despite relevant suggestions such as the already mentioned notion by Balmer (2001a) little academic research has been put forward that could help to reveal the auditory dimension. Therefore, the next section will look at anecdotal literature and practical examples to give further insight to the dimension of sound. Various companies already communicate their brand in an acoustic way. One of the most evident examples is the well known sonic logo of Intel[®] launched in 1994 (Simmons, 2005). Intel[®] as an ingredient brand has managed to get its sonic logo played every time a commercial of an affiliated company is broadcasted. Other examples of companies that have introduced sonic logos, ring tones or other types of corporate sounds are Direct Line, Siemens, Allianz, BAA and Lufthansa (MetaDesign, 2010; Treasure, 2007). In addition, the start-up sounds of Microsoft[®] Windows and Apple[®] computers are good examples for the use of sound (Treasure, 2007). However, the use of sonic logos is by no means limited to companies. For example, Plaid Cymru, a political party of Wales, has not only launched a new visual logo in 2006 but also a sonic logo that was featured on the party website (BBC, 2006; Plaid Cymru, 2007). According to Helen Mary Jones, an Assembly Member of Plaid Cymru, the sonic logo particularly symbolises the innovative position in political communications of the party (BBC, 2006).

This literature review has revealed various streams of research related to sound and has showed that sound is an influencing factor regarding emotion, attitude formation and behaviour (e.g. Herrington and Capella, 1994; 1996; Hevner, 1935a; 1935b; Milliman, 1982; 1986; Yalch and Spangenberg, 1990). However, although some indications for the role of sound in the field of corporate identity and corporate image have been identified (e.g. Balmer, 2001a; Schmitt and Simonson, 1997; Schmitt et al, 1995) this literature review has exposed a significant lack of research in this field.

The following table (Table 2.1) chronologically summarises key authors and concepts in the area of sound and music.

Table 2.1 – Key Authors and Concepts of Sound and Music Studies

(Hevner, 1935a; 1935b; 1936; 1937)	<ul style="list-style-type: none"> ▪ Major mode, fast tempo, loud dynamics, lively and varied rhythm are related to happy, merry, graceful, and playful. ▪ Minor mode, slower tempo, quiet dynamics, unvaried rhythm and low register are related to sad, dreamy, and sentimental.
(Smith and Curnow, 1966)	<ul style="list-style-type: none"> ▪ Volume of music is effecting shopping time negatively. Volume of music is not affecting average sales per person.
(Wintle, 1978)	<ul style="list-style-type: none"> ▪ Emotional response on TV commercial is considerably influenced by music along the three factors activity, pleasantness, and personal relevance. The prompted character in the ad appears to be intensified by supporting music.
(Gorn, 1982)	<ul style="list-style-type: none"> ▪ Background music in advertisements can be associated with the promoted product, which stimulates product relevant thoughts and product choice. Classical conditioning can lead to association of the product with the positive feelings of liked music. (Note: This study has been strongly questioned by e.g. Kellaris and Cox (1987)).
(Milliman, 1982; 1986)	<ul style="list-style-type: none"> ▪ Tempo of music can affect purchase behaviour. Slow music leads to slow in-store traffic, higher sales volume (1982) and slower food consumption (1986).
(Sewall and Sarel, 1986)	<ul style="list-style-type: none"> ▪ Music as part of radio commercial has no significant influence on recall.
(Stewart and Furse, 1986)	<ul style="list-style-type: none"> ▪ Study analysed more than 1000 commercials.
(Park and Young, 1986)	<ul style="list-style-type: none"> ▪ Music has a positive effect on brand formation for people in a low involvement stage, and distracting effect for people in a high-involvement state.
(Kellaris and Cox, 1987)	<ul style="list-style-type: none"> ▪ Replication of Gorn's (1982) study reveals no evidence that product choice is not influenced by music of commercials.
(Hunt, 1988)	<ul style="list-style-type: none"> ▪ The use of music in radio commercials leads to higher recall (than commercials using a statement format).

(Stout and Leckenby, 1988)	<ul style="list-style-type: none"> ▪ Mode of music (i.e. major and minor) influences attitude formation.
(Yalch and Spangenberg, 1988)	<ul style="list-style-type: none"> ▪ Encountering unfamiliar music negatively influences consumers' time perceptions.
(Bruner, 1990)	<ul style="list-style-type: none"> ▪ Music is non-randomly assigned to emotional meaning (moods). ▪ Music non-randomly leads to affective reactions. ▪ Music can evoke non-random affective and behavioural responses (i.e. Background music can influence consumers' mood and can evoke affective and behavioural responses in consumers. ▪ Music familiarity, music enjoyment and prior mood are moderating the relation between music and consumer response.
(Alpert and Alpert, 1990)	<ul style="list-style-type: none"> ▪ Music in stores can have a positive effect on sales. ▪ Match between reminded mood and mood of purchase occasion has positive effect on buying intention.
(Yalch and Spangenberg, 1990)	<ul style="list-style-type: none"> ▪ Customers' perceptions of their shopping time varied with the type of music, depending on their age. Shoppers exposed to a more familiar music setting (foreground for young shoppers and background for older shoppers) report shorter perceived shopping time.
(MacInnis and Park, 1991)	<ul style="list-style-type: none"> ▪ Consistency (i.e. fit) between musical and non-musical elements of a message is positively related to advertising effectiveness, in particular with high-involvement consumers. ▪ "Musical fit" was defined as "<i>consumers' subjective perceptions of the music's relevance or appropriateness to the central ad message</i>" (MacInnis and Park, 1991:162).
(Kellaris et al, 1993)	<ul style="list-style-type: none"> ▪ The perception of messages in commercials is enhanced when thoughts evoked by the message and music are congruent.
(Yalch and Spangenberg, 1993)	<ul style="list-style-type: none"> ▪ Less familiar background music was reported to lead to longer actual shopping time, whereas more familiar foreground music led to longer perceived shopping time.
(Herrington and Capella, 1994)	<ul style="list-style-type: none"> ▪ Key musical characteristics are tempo, volume, pitch, mode, harmony, rhythm, and affective evaluation. ▪ Musical preference, which seems to vary by demographic factors such as age, income education, gender, appears to account more for behavioural response than other factors (e.g. tempo, volume, pitch).
(Dubé et al, 1995)	<ul style="list-style-type: none"> ▪ Pleasure and arousal, which is induced by background music, are positively related to consumers' desire to affiliate in a buyer-seller interaction.

(Herrington and Capella, 1996)	<ul style="list-style-type: none"> ▪ Not tempo and volume but the shoppers' preference for the background music is affecting shopping behaviour in terms of time and expenditures.
(Fraedrich and King, 1998)	<ul style="list-style-type: none"> ▪ The paper reviews literature on non-musical sound and noise. In detail, the paper looks at sound elements, perception and interpretation. The paper defines sound as constituting of four elements, namely: loudness, tone, pitch and frequency. Perceived pleasantness of sound is related to sound frequency and mediated by whether the sound is continuous (e.g. smoke alarm) or modulated (e.g. police sirens), whereby modulated sound appears to be perceived as less intense than continuous sound. ▪ The paper summarises that a number of variables, grouped into three major categories, which collectively effect perception of sound. The categories and variables are: sound characteristics (loudness, tone, pitch, frequency, noise and modulation), physiological variables (auditory fusion, perceptual fusion and ear-dominance), and demographic variables (age, gender, eye-colour). ▪ Moreover, the authors argue that sound is beneficial in gaining and/or focusing attention, and that sound can be associated with feelings and memories. Consequently, the paper argues that "<i>judicious selection of sounds can be used to elicit specific and desirable responses in target audiences</i>" (Fraedrich and King, 1998:131). ▪ The authors argue that sound often is associated with objects and symbols and that such sound/object pairings can elicit recall of information or feelings. Consequently, the authors compare the visual and the auditory dimension and conclude that "<i>sounds can become as familiar and representative to an audience as their visual brand logo counterparts</i>" (Fraedrich and King, 1998:134). In addition, sound/object pairing can be achieved through natural associations (e.g. sound of water) or conditioned association (e.g. sonic logo). While establishing natural associations appear to be easier, conditioned association are more difficult to establish but seem to be more enduring. Furthermore, familiarity and frequency influence elicitation of responses, and consistency of sound/object pairing is crucial for conditioned pairings. ▪ Finally, the authors point to the need for further investigation of cultural differences that might affect the perception of sound, thus investigation the need for adaptation of sound in relation to market segmentation.
(North and Hargreaves, 1999)	<ul style="list-style-type: none"> ▪ Background music can decrease perceived waiting time, based on disrupted internal time perception.

(North et al, 1999)	<ul style="list-style-type: none"> ▪ On-hold music that is liked and is perceived to fit consumers expectation of typical on-hold stimuli leads to acceptance of longer waiting times.
(Yalch and Spangenberg, 2000)	<ul style="list-style-type: none"> ▪ More-familiar music was linked to longer perceived but short actual shopping time, whereas less familiar music was linked to longer actual shopping times.
(Mattila and Wirtz, 2001)	<ul style="list-style-type: none"> ▪ The congruency of arousing qualities of ambient stimuli (i.e. sound-scent fit) has a positive effect on the perception of environment, impulse buying behaviour, and satisfaction.
(McDonald et al, 2001)	<ul style="list-style-type: none"> ▪ Service brands can become more tangible by applying as many as possible associated brand elements such as music.
(Jackson, 2003)	<ul style="list-style-type: none"> ▪ Sound as vital dimension of branding (i.e. sonic branding).
(Fulberg, 2003)	<ul style="list-style-type: none"> ▪ Sonic branding is proposed as a significant element in the retail environment, related to brand experience and brand loyalty.
(North et al, 2004)	<ul style="list-style-type: none"> ▪ The fit of music and voice fit with the message of the ad can increase recall of information provided in the ad, can enhance the liking of the ad, and has positive effects on the likelihood of purchasing the product.
(Alpert et al, 2005)	<ul style="list-style-type: none"> ▪ Congruency of meaning of purchase occasion and mood evoked by music is positively related to likelihood of purchasing.
(Lindstrom, 2005a; 2005b)	<ul style="list-style-type: none"> ▪ Sound is one element of sensory branding.
(Zander, 2006)	<ul style="list-style-type: none"> ▪ Given musical fit (i.e. music fits with central message or product) music can evoke different impressions about a brand or product endorser, without have an effect on the general assessment of the product or brand.
(McDonnell, 2007)	<ul style="list-style-type: none"> ▪ Music and scent are positively effecting service evaluation and perceived comfort for customers waiting in a queue.
(Fiore and Kelly, 2007)	<ul style="list-style-type: none"> ▪ Categorisation of sound on websites into a) sound to better understand the product (sound related to product characteristic) and b) sound to achieve a positive consumer attitude towards the product or service (ambient or atmospheric sound).
(Treasure, 2007)	<ul style="list-style-type: none"> ▪ Role of sound to communicate brand (Sonic branding).

Source: The Researcher

2.3 Taxonomy of Corporate Identity and Corporate Image

This research focuses on the role of auditory identity as an element of corporate identity. Thus, after reviewing relevant literature on sound in the last section, the following section will discuss the relevant literature in the field of corporate identity as well as the directly related area of corporate image. In particular, this section focuses on the different viewpoints on an organisation, on various streams of research and resulting paradigms *vis-à-vis* identity, as well as on aspects of corporate identity management and corporate image formation.

The concepts of corporate identity and corporate image have been in the focus of interest over the last few decades by many academics and have been related to various streams of research (Brown et al, 2006). Consequently, a variety of perspectives and paradigms leading to a cornucopia of definitions has emerged over time, leaving researchers as well as practitioners with ambiguous concepts and taxonomies and interchangeably used terminology regarding the concepts of identity and image (Abratt, 1989; Bromley, 2001; Christensen and Askegaard, 2001; Melewar, 2003; Nguyen and LeBlanc, 1998; Suvatjjs and De Chernatony, 2005; Thomas and Hill, 1999; Topalian, 2003; Wilkinson and Balmer, 1996).

In order to present a structured review of the manifold literature in the field of identity and image, an appropriate framework is beneficial. For that reason, the following section will first follow the taxonomy provided by Brown et al (2006), which categorises the concepts of identity and image according to different perspectives that researchers can take when looking at organisations (Brown et al, 2006). Even though the taxonomy by Brown et al (2006) is coined by an organisational behaviour perspective, the taxonomy is chosen as it provides a good level of differentiation to depict the concepts of identity and image.

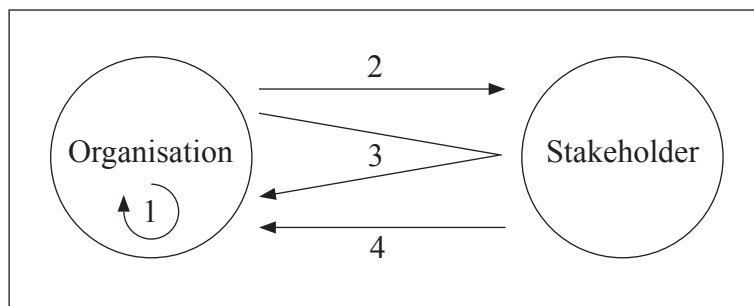
Subsequently, this chapter reviews the corporate identity literature according to the categorisations of five paradigms as proposed by Balmer (1995; 1998; 2001a), Simões et al (2005) and Van Riel and Balmer (1997) comprising the visual

paradigm, integrated communication paradigm, organisational studies paradigm, marketing paradigm, and interdisciplinary paradigm.

Starting with the basic distinction between an internal and external perspective to the organisation, Brown et al (2006) distinguish between four viewpoints expressed by the following four questions:

1. What are we as an organisation?
2. What does the organisation want others to think about the organisation?
3. What does the organisation believe others think of the organisation?
4. What do the stakeholders actually think of the organisation?

Figure 2.1 – Four Viewpoints of an Organisation



Source: Brown et al (2006:100)

Linking the categorisation of internal and external to the five paradigms, marketing theorists (e.g. Aaker, 1996; Andreassen and Lindestad, 1998; Balmer, 1995; Bhattacharya and Sen, 2003; De Chernatony, 1999; De Chernatony and Harris, 2000; Keller, 1999; Knox and Bickerton, 2003; Martineau, 1958; McDonald et al, 2001; Nelson, 1962; Nguyen and LeBlanc, 1998; Spector, 1961; Zinkhan et al, 2001) mainly adopt an external perspective, since research focuses on investigating the relation between company and consumer for instance. In contrast, organisational behaviour theorists (e.g. Albert and Whetten, 1985; Ashforth and Mael, 1989; Bergami and Bagozzi, 2000; Dutton and Dukerich, 1991; Dutton et al, 1994) tend to reflect upon identity and image from a perspective internal to the organisation (Hatch and Schultz, 1997).

In addition to the distinction between an internal and external perspective, Brown et al (2006) differentiate between an individual and organisational or group level. Corporate image can be defined as the cognitive interpretation of impressions that an individual or a group holds about an organisation (Cornelissen, 2000). The difference between the individual level and the collective organisational or group level is referring to the level of analysis (Brown et al, 2006), i.e. whether identity and image are considered in relation to an individual or to a group of individuals. Talking about individual and organisational levels, it is important to stress the difference between the level of analysis in this case in contrast to the level of abstraction, which refers to the size of the group that an individual sees as self-defining, i.e. whether an individual for instance defines himself based on the values and beliefs of the department or the entire organisation (Brown et al, 2006).

The third category for distinction of the concepts of identity and image, as provided by Brown et al (2006) refers to the scope of associations an individual or group can hold about an organisation (Brown et al, 2006), i.e. the degree to which particular associations concerning an organisation are incorporated in an image. Brown et al (2006) consider whether a particular set of perceived attributes (i.e. image) includes all aspects of an organisation or if it focuses only on a subset of aspects of corporate identity, namely what is 'central', 'enduring' and 'distinctive' (CED) to the organisation. The particular classification of 'central', 'enduring' and 'distinctive' (CED) refers to the classification by Albert and Whetten (1985) who provided an influential definition of the organisational identity concept, by identifying those three aspects of CED as the character of an organisation (Hatch and Schultz, 1997).

Based on four basic viewpoints (See Figure 2.1) and the three types of distinction, namely 1.) internal and external, 2.) individual level and group level, and 3.) all aspects and CED aspects, Brown et al (2006) have put forward a comprehensive categorisation regarding the concepts of identity and image, respectively. The following section will discuss the constructs based on this taxonomy in more detail.

2.3.1 Organisational Associations and Corporate Identity

Starting with an internal perspective towards the organisation, the question “Who are we as an organisation?” reflects the associations about the organisation held by members of the organisation (Brown et al, 2006). Within this category, Brown et al (2006) identify three concepts, namely ‘member organisational associations’, ‘perceived organisational identity’ and ‘organisational identity’.

First, based on an internal and organisational perspective the term ‘member organisational associations’ refers to all aspects held by an individual member of the organisation about the organisation (Brown et al, 2006). This complete set of associations makes up the reality for that individual (Brown et al, 2006). The following table (Table 2.2) summarises the key classifications of this perspective:

Table 2.2 – Member Organisational Associations

Perspective:	→ Internal	External
Level of Analysis:	→ Individual	Group/Organisation
Scale of Associations:	→ All Aspects	CED Aspects

Source: Brown et al (2006)

By limiting the above concept of member organisational associations to a subset of CED associations, namely what a member of an organisation believes is distinctive, central and enduring to the organisation (Dutton et al, 1994), the related concept of ‘perceived organisational identity’ is derived (Brown et al, 2006). The following table (Table 2.3) summarises the key classifications of this perspective:

Table 2.3 – Perceived Organisational Identity

Perspective:	→ Internal	External
Level of Analysis:	→ Individual	Group/Organisation
Scale of Associations:	All Aspects	→ CED Aspects

Source: Brown et al (2006)

The subsequent construct of ‘organisational identity’ also takes an internal perspective but in contrast to the two concepts of member organisational associations and perceived organisational identity, the level of analysis is on a group or organisational level, i.e. organisational identity is perceived to be a collective construct (Brown et al, 2006). According to Brown et al (2006) organisational identity exclusively focuses on aspects and beliefs that are central, enduring and distinctive (CED) to the members of an organisation (Hatch and Schultz, 1997; Whetten and Mackey, 2002). The following table (Table 2.4) summarises the key classifications of this perspective:

Table 2.4 – Organisational Identity

Perspective:	→ Internal	External
Level of Analysis:	Individual	→ Group/Organisation
Scale of Associations:	All Aspects	→ CED Aspects

Source: Brown et al (2006)

However, some authors have added further perspectives to this concept. Pratt and Foreman (2000) for instance agree with the notion that organisational identities are constituted by what is central, enduring and distinctive, however, they claim that organisations do not only have one but have multiple identities. Furthermore, Scott and Lane (2000) emphasise the role of internal relationships, by arguing that organisational identity is a set of beliefs that are shared by top managers and stakeholders of what is central, enduring, and distinctive of an organisation.

Moreover, in partial contrast to the widely agreed focus on CED aspects (e.g. Albert and Whetten, 1985; Brown et al, 2006; Hatch and Schultz, 1997), Gioia et al (2000:63) claim that the central and distinctive aspects are not reflected in an enduring manner but are rather dynamic and that the “*apparent durability of identity is somewhat illusory*”. Consequently, Gioia et al (2000) conceptualise organisational identity more as an unstable concept, which is often changed and redefined by the members of the organisation.

Whetten and Mackey (2002) advocate a social-actor concept, which differentiates organisational identity as either being viewed as the shared beliefs of a group of individual organisation's members or alternatively as the identity of an organisation that is perceived as a social individual actor.

Overall, the concept of organisational identity is strongly associated with the work of organisational behaviourists (e.g. Albert and Whetten, 1985; Ashforth and Mael, 1989; Bergami and Bagozzi, 2000; Dutton and Dukerich, 1991; Dutton et al, 1994; Elsbach and Kramer, 1996; Foreman and Whetten, 2002; Gioia et al, 2000; Gioia and Thomas, 1996; Hatch and Schultz, 1997; Whetten and Godfrey, 1998; Whetten and Mackey, 2002).

However, based on the same viewpoint (i.e. what the organisation is), marketing theorists (e.g. Balmer, 2001a; Balmer and Gray, 2003; Bickerton, 2000; Bolger, 1959; Easton, 1966; Hill, 1962; Knox and Bickerton, 2003; Martineau, 1958; McDonald et al, 2001; Nelson, 1962; Newman, 1953; Schmitt and Simonson, 1997; Simões et al, 2005; Spector, 1961; Tucker, 1961) define this concept as 'corporate identity' (Balmer and Wilson, 1998). While organisational identity focuses on the relationship between organisational members (i.e. employees) and their feelings and beliefs about the organisation (Bick et al, 2003), Hatch and Schultz (1997) argue that corporate identity refers to a management-driven perspective of conveying the key idea of the organisation to external audiences (Balmer, 1998). The various paradigms in the corporate identity literature will be discussed in detail in Section 2.4.

The concept of corporate personality, which is closely related to organisational identity and corporate identity, takes a similar internal perspective (i.e. what the organisation is) and has been of interest by various academics (Abratt, 1989; Balmer and Wilson, 1998; Bernstein, 1984; Birkigt and Stadler, 1986; Gray and Balmer, 1998; Markwick and Fill, 1997; Olins, 1978; Pilditch, 1970; Van Riel and Balmer, 1997).

Markwick and Fill (1997) define corporate personality as the combination of tangible components and intangible elements of an organisation such as values, beliefs and

the way the organisation operates. In a similar way, Bernstein (1984:57) conceptualises corporate personality (based on the definition of ‘personality’ by the Encyclopaedia Britannica) as the “*sum total of characteristics*” of an organisation. Balmer (1995:25) links corporate personality to a “*mix of cultures present within the organization*” and Balmer and Stotvig (1997:170) define corporate personality as a “*distinct mix of ideologies present within the organization*”.

The differentiation between corporate personality and corporate identity has been widely acknowledged, given that according to Balmer and Stotvig (1997) and Balmer and Wilson (1998) a number of authors have argued that corporate personality is not the same as corporate identity but is the determinant factor of the formation of corporate identity (Abratt, 1989; Balmer, 1995; 1998; Birkigt and Stadler, 1986; Olins, 1978; 1989). Similarly, Balmer (1998) considers corporate personality as the foundation of corporate identity and refers to other authors (e.g. Hatch and Schultz, 1997; Olins, 1978) who claim that corporate personality is the most important concept in the field of identity.

Depending on the streams of research, key concepts such as ‘organisational identity’ and ‘corporate identity’ have emerged that refer to this first viewpoint. Moreover, the concept of ‘corporate personality’ as an underlying construct has been widely acknowledged. However, various nuances of conceptualisation are noticeable, many of them based on a particular academic orientation and affiliation (i.e. marketing, organisational behaviour, etc.).

2.3.2 Intended Associations and Desired Image

The second viewpoint refers to a projective stance with the corporate identity construct being the point of reference. That is, as proposed by Brown et al (2006) this viewpoint is based on the associations that managers want important audiences to hold about the organisation. Reflected by the question “What does the organisation want others to think about the organisation?” two categories namely ‘intended associations’ and ‘intended image’ are proposed (Brown et al, 2006). Both concepts consider external associations with the organisation’s identity (i.e. external

perspective) and the analysis of associations takes place on an organisational or group level rather than on an individual level (Brown et al, 2006).

Whereas ‘intended associations’ is defined as the complete set of associations an organisation wants external stakeholders to hold about the organisation (Brown et al, 2006), ‘intended image’ refers to the limited set of associations that are central, enduring and distinctive to the organisation (Brown et al, 2006). The following two tables (Table 2.5 and Table 2.6) summarise the key classifications of this perspective:

Table 2.5 – Intended Associations

Perspective:	Internal	→ External
Level of Analysis:	Individual	→ Group/Organisation
Scale of Associations:	→ All Aspects	CED Aspects

Source: Brown et al (2006)

Table 2.6 – Intended Image

Perspective:	Internal	→ External
Level of Analysis:	Individual	→ Group/Organisation
Scale of Associations:	All Aspects	→ CED Aspects

Source: Brown et al (2006)

According to Brown et al (2006), other authors who refer to the same viewpoint have put forward different terminologies such as desired corporate identity (Van Rekom, 1997; Van Riel and Balmer, 1997), desired future image (Gioia et al, 2000; Gioia and Thomas, 1996), desired identity (Balmer and Soenen, 1999; Van Riel, 1995), desired organisational image (Scott and Lane, 2000), projected image (Gioia et al, 2000) and organisational image (Whetten and Mackey, 2002).

The term ‘desired future image’ for instance has been defined by Gioia et al (2000:67) as “*visionary perception the organization would like external others and internal members to have of the organization sometime in the future*”. Simões et al (2005) also adopt a projecting perspective by arguing that corporate identity is the

ideal self-image an organisation wants to convey to stakeholders. Van Riel and Balmer (1997) refer to the concept of desired corporate identity when they argue that in order to narrow the gap between the actual and the desired corporate identity, managers can use the corporate identity mix and apply corporate branding and positioning strategies. Melewar and Saunders (1998) refer to a projected image of a business when pointing out the importance of corporate visual identity. Swanson (1957), taking a marketing and consumer perspective, introduced the idea of an ideal corporate image, which according to Hatch and Schultz (1997) is similar to the concepts of intended associations and intended image. Similarly, Balmer and Soenen (1999:84) conceptualise desired identity as “*corporate owners and senior management’s vision*”, which constitutes one element of their proposed ACID Test of corporate identity management.

Overall, numerous terminologies have been used to reflect a similar viewpoint, namely what organisations or managers and leaders of an organisation want external audiences to think about an organisation. Moreover, depending on the academic domain such as marketing or organisational behaviour, various concepts such as desired corporate identity and desired organisational image have been conceptualised (Brown et al, 2006).

2.3.3 Construed Associations and Image

Following the taxonomy by Brown et al (2006) the third viewpoint is reflected by the question “What does the organisation believe others think of the organisation?”. This perspective is defined as what members of the organisation believe stakeholders outside the organisation think about the company. Thus, this viewpoint is concerned with interpreted associations of external constituents of the organisation and the level of analysis is on an organisational or group level (Brown et al, 2006). According to the last viewpoints, this perspective subsequently has been differentiated based on the scope of associations (i.e. all aspects and aspects that are central, enduring and distinctive). Consequently, the first concept of ‘construed associations’ incorporates all aspects of an external stakeholder group, whereas ‘construed image’ is limited to

the CED aspects (Brown et al, 2006). The following two tables (Table 2.7 and Table 2.8) summarise the key classifications of these two concepts:

Table 2.7 – Construed Associations

Perspective:	Internal	→ External
Level of Analysis:	Individual	→ Group/Organisation
Scale of Associations:	→ All Aspects	CED Aspects

Source: Brown et al (2006)

Table 2.8 – Construed Image

Perspective:	Internal	→ External
Level of Analysis:	Individual	→ Group/Organisation
Scale of Associations:	All Aspects	→ CED Aspects

Source: Brown et al (2006)

Despite the fact that the two constructs (i.e. construed associations and construed image) are primarily related to an organisational or group level (e.g. construed associations of consumers), Brown et al (2006) point out that managers also could think of construed associations and construed image at an individual level, for instance with regard to a particular politician or individual opinion leader. However, according to Brown et al (2006) various other concepts and terms such as construed external image (Dutton et al, 1994; Gioia et al, 2000), perceived external prestige (Smidts et al, 2001), perceived organisational prestige (Bhattacharya et al, 1995; Van Riel and Balmer, 1997) and reflected stakeholder appraisals (Scott and Lane, 2000) have been defined. In addition, Dutton and Dukerich (1991) refer to ‘organisational image’ as how a member of an organisation believes external audiences see and distinguish the organisation.

Dutton et al (1994) refer to this viewpoint as ‘construed external image’, and link it to the concept of organisational identification. Based on social identity theory (c.f. Ashforth and Mael, 1989), organisational behaviourists argue that an attractive construed external image strengthens the organisational identification of organisation members (Dutton et al, 1994; Mael and Ashforth, 1992). Moreover, Gioia et al

(2000) point out that possible discrepancies between the construed external image (i.e. “how others see us”) and corporate identity (i.e. “how we see us”) might call for managerial action. Such scrutiny of actual identity and construed external image can be linked directly to the concept of desired identity (Balmer and Soenen, 1999; Van Riel, 1995), as reflected by the second viewpoint.

Smidts et al (2001:1052) equate ‘perceived external prestige’ with ‘construed external image’ (Dutton et al, 1994) and define it as “*how an employee thinks outsiders view his or her organization*”, which is determined by various sources of information. Although Smidts et al (2001) generally consider ‘perceived external prestige’ related to an individual level of analysis, in the case of homogenous associations among a group of members, ‘perceived external prestige’ can also be related to a group level. Furthermore, Scott and Lane (2000:53) refer to this particular viewpoint as ‘reflected stakeholder appraisals’, defining it as “*managers’ perceptions of the impressions stakeholders form of an organization*”, which for instance can be directly communicated to managers at a shareholder meeting.

Reviewing the literature reveals that this third perspective, conceptualised as construed associations and image (Brown et al, 2006) and construed external image (Dutton et al, 1994; Gioia et al, 2000) has been mainly considered based on an organisational behaviourist paradigm.

2.3.4 Corporate Associations, Corporate Image and Reputation

The fourth viewpoint as defined by Brown et al (2006) is related to the question “What do stakeholders actually think of the organisation?”, leading to two constructs, namely ‘corporate associations’ and ‘reputation’.

Firstly, ‘corporate associations’ refers to the total set of corporate or organisational associations held by stakeholders external to an organisation (Brown et al, 2006). According to Brown et al (2006:99) the concept of corporate associations is based on an individual perspective namely “*what individuals know or believe about an organization*”. Brown and Dacin (1997:68) define corporate associations as

“consumers’ cognitive associations for a company” and include “all the information about a company that a person holds” (Brown and Dacin, 1997:69). Dacin (2002:254) refers to corporate associations as “any types of beliefs, moods and emotions, evaluations etc, about an organization that are held by individuals and that are mentally associated with the organization.” The external perspective of ‘corporate associations’ is reflected by Brown et al (2006:104) when they argue that “corporate associations belong to the stakeholder, not the organisation”. The following table (Table 2.9) summarises the key classifications of this concepts:

Table 2.9 – Corporate Associations

Perspective:	Internal	→ External
Level of Analysis:	→ Individual	Group/Organisation
Scale of Associations:	→ All Aspects	CED Aspects

Source: Brown et al (2006)

Lastly, Brown et al (2006) conceptualise ‘reputation’ similar to ‘corporate associations’ as external to the organisation and as based on an individual perspective, however, arguing that reputation refers to a set of corporate associations that stakeholders outside an organisation believe are ‘central’, ‘enduring’ and ‘distinctive’ (CED) to the organisation. Consequently, the authors consider reputation as a subset of corporate associations. Dutton and Dukerich (1991) define what outsiders belief is distinctive, central and enduring to the organisation as ‘organisational reputation’. The following table (Table 2.10) summarises the key classifications of this concepts:

Table 2.10 – Reputation

Perspective:	Internal	→ External
Level of Analysis:	→ Individual	Group/Organisation
Scale of Associations:	All Aspects	→ CED Aspects

Source: Brown et al (2006)

The perspective of what external audiences think or believe about an organisation has been conceptualised by many authors using a variety of terminologies such as

company evaluation (Brown and Dacin, 1997; Sen and Bhattacharya, 2001), corporate associations (Berens et al, 2005; Brown, 1998; Brown and Dacin, 1997; Dacin and Brown, 2002), corporate identity (Bhattacharya and Sen, 2003) corporate image (Markwick and Fill, 1997; Van Rekom, 1997), image (Barich and Kotler, 1991; Britt, 1971; Davies et al, 2003; Dichter, 1985; Enis, 1967; Gronroos, 1984), organisational image (Hatch and Schultz, 1997), organisational reputation (Scott and Lane, 2000), reputation (Dacin and Brown, 2002; Gioia et al, 2000; Van Riel, 1995; Whetten, 1997) and transient impressions (Gioia et al, 2000).

Barich and Kotler (1991:95) define image as “*the sum of beliefs, attitudes, and impressions that a person or group has of an object*” and Bernstein (cited in Abratt, 1989:68) stresses the external perspective by pointing out that “*image is not what the company believes it to be, but the feelings and beliefs about the company that exist in the minds of its audiences*”. Regarding the two opposite key perspectives (i.e. external and internal) Hatch and Schultz (1997:358-359) for instance advocate a more integrated approach that combines the marketing and organisational perspective, by defining organisational image as “*a holistic and vivid impression held by an individual or a particular group towards an organization...*”. Moreover, the direct link between corporate image and corporate identity has been stressed by various authors. Van Rekom (1997:411) for instance argues that “*corporate image always starts with an organization’s corporate identity. The organization’s identity is perceived and interpreted by stakeholders in terms of its image*”.

Similarly, some authors have argued that corporate image is the direct result of projecting the corporate identity into the minds of various stakeholders using corporate identity management and that subsequently reputation will develop over time (Baker and Balmer, 1997; Gray and Balmer, 1998). Moreover, Whetten and Mackey (2002:401) link organisational reputation to identity by arguing that organisational reputation “*is a particular type of feedback, received by an organization from its stakeholders, concerning the credibility of the organization’s identity claims*”.

The framework, categorisation and suggested terminologies provided by Brown et al (2006) are strongly coined by an organisational behaviour perspective. Organisational behaviour literature, in contrast to marketing literature, mainly considers identity and image from an internal perspective (Hatch and Schultz, 1997). According to Brown et al (2006) image is related to what a member of an organisation wants outsiders to believe (i.e. intended image), or what members believe outsiders believe about the organisation (i.e. construed image) and corporate associations and reputation refer to what perceptions external stakeholders in fact hold of an organisation.

However, in contrast to the organisational behaviour literature, marketing literature strongly takes an external standpoint towards the concepts of identity and image (Hatch and Schultz, 1997). Corporate identity therefore is associated with the management-driven perspective of communicating the key aspects of an organisation (Balmer, 1998). Similarly, corporate image and reputation are characterised as the collective associations, beliefs and values that stakeholders external to the organisation (e.g. customers) hold about the company (Argyriou et al, 2006). That is, corporate image and reputation are taking place on a receiver level (Gray and Balmer, 1998). Dutton et al (1994:249) stress the external perspective of organisational reputation when they define it as “*outsiders' beliefs about what distinguishes an organization*”.

Corporate image on the one hand has been characterised as the instant picture of the company in the mind of stakeholders (Gray and Balmer, 1998), whereas corporate reputation is based on the enduring perception of distinctive attributes held by stakeholders concerning the company (Balmer, 2001a). Moreover, reputation has been differentiated from corporate image depending on the time that is necessary to create it. While with a well-coordinated campaign including logo, signage, corporate advertising and public relations, corporate image can be adjusted and created relatively quickly, a long-term approach is required to gain a favourable reputation, including not only a sound communication plan but also a good corporate identity and reliable positive performance over a longer period (Gray and Balmer, 1998). Consequently, Karaosmanoglu and Melewar (2006:2002) define reputation as

“*aggregation of corporate images consumers hold over time*”. Similarly, Rindova and Fombrun (1998:63) define organisational reputation as “*the aggregate assessments of constituents of an organization based on its past behaviours*”. Therefore, reputation is perceived to be the overall image based on an aggregation of information about the organisation over time (Ind, 1997), which makes reputation more stable than corporate image (Fombrun, 1996).

So far, the framework by Brown et al (2006) has provided some valuable guidance to depict the variety of concepts and terminologies of the key concepts of corporate identity and corporate image. However, it needs to be stressed that the categorisations and proposed terminology are strongly influenced by the particular stream of research. That is, depending on academic perspectives of different academic camps (e.g. visual, marketing, organisational behaviour) various nuances *vis-à-vis* the conceptualisation of identity and image can be identified.

In order to reflect on these different academic perspectives and positions, the following section will discuss the concepts of identity and image, according to five paradigms identified by Balmer (1995; 1998; 2001a), Simões et al (2005) and Van Riel and Balmer (1997), namely the visual paradigm, the integrated communication paradigm, the organisational studies paradigm, the marketing paradigm and the interdisciplinary paradigm.

2.4 Paradigms in Corporate Identity and Corporate Image

Literature

After discussing various categorisations of the concepts of corporate identity and corporate image, the next section will depict key paradigms in the field in order to differentiate between key academic perspectives. Being aware of the fact that other less prevalent paradigms have been proposed, based on the categorisations by Balmer (1995; 1998; 2001a), Simões et al (2005) and Van Riel and Balmer (1997) five key paradigms, namely the visual paradigm, integrated communication

paradigm, organisational studies paradigm, marketing paradigm, and the interdisciplinary paradigm will be discussed.¹

2.4.1 The Graphic Design and Visual Paradigm

Early literature considered corporate identity strongly equivalent to visual elements and applications such as logos, house styles, stationary, uniforms, vehicles (Van Riel, 1995) and literature on corporate identity and corporate image mainly was put forward by practitioners and design consultants (e.g. Bernstein, 1984; Birkigt and Stadler, 1986; Carter, 1975; 1978; 1982; Chajet and Shachtman, 1991; Henrion and Parkin, 1967; Ind, 1992; Margulies, 1977; Olins, 1978; Pilditch, 1970; Selame and Selame, 1975).

Initially, the key purpose of visual identity was to generate visibility for the organisation (Balmer and Gray, 2000; Van Riel, 1995). However, this has changed and the visual dimension has increasingly been considered as means to influence the perception of stakeholders (Balmer, 1998). Balmer (1995) has identified four key purposes of the visual dimension, namely, communicating the mission and philosophy, providing a visualisation of the cultural values, supporting consistent communication activities and finally ensuring an up-to-date visual appearance of the organisation.

In addition, visual identity has been linked to positioning strategy (Balmer, 1995; Van Riel and Balmer, 1997), based on its role to communicate corporate strategy and changes in strategy (Van Riel, 1995). Overall, the role of visual identity concerning corporate strategy communication has been widely acknowledged in the literature (Carter, 1982; Henrion and Parkin, 1967; Margulies, 1977; Pilditch, 1970; Van Riel and Balmer, 1997). Hatch and Schultz (1997) for instance argue that the visual perspective is concerned with the management of strategic and visual dimensions of corporate identity to all stakeholders (Simões et al, 2005). The strategic aspect of the

¹ An example of a less prevalent paradigm is the psychological paradigm, proposed by Balmer (1998), which considers corporate image as mental image, linked to the role of symbols to convey organisations' core characteristics.

visual dimensions is also reflected by Balmer's (1995) categorisation, which includes the strategic visual school as one of the seven schools of thought.

Linked to the positioning and branding strategy (Van Riel and Balmer, 1997), Olins (1989; 1995) has proposed three categories of visual identity structure, namely (1) monolithic, as where a company uses one visual identity for all its activities, (2) endorsed, where the group name endorses all of the other company or brand names and (3) branded, where the company uses different apparently unrelated brands.

In addition to the strategic aspect, research in the visual identity area has focused on the possibilities of communicating core values and beliefs, i.e. the culture of the organisation, by means of graphic design (Balmer, 1995; Van Riel and Balmer, 1997). Abratt (1989:68) has highlighted this deeper perception by pointing out that, "*visual identity is a part of the deeper identity of the group, the outward sign of the inward commitment, serving to remind it of its real purpose*".

2.4.2 The Integrated Communication Paradigm

Balmer (2001a:253) defines corporate communication as "*the channels by which a business identity is made known to internal and external stakeholders and networks [...]*". The integrated communication paradigm particularly emphasises the effective integration of all communication efforts of an organisation and whether the company strategy and formal communication efforts (i.e. controlled communication) are designed to transport consistent and congruent messages to all stakeholders (Bick et al, 2003). The integrated perspective deals with the degree of integration of the corporate communication mix (cf. Van Riel, 1995), including management, organisational and marketing communications and whether all elements of the mix are integrated in terms of management, philosophy and process (Balmer, 2001a). Based on this conceptualisation of corporate communication, Van Riel and Balmer (1997:341) stress that "*the corporate communication mix and its management is fundamentally different from and is more complicated than, the marketing communications mix*". Similarly, Christensen et al (2008:424) refer to the difference between the more traditional concept of integrated marketing communication (IMC)

and the broader concept of integrated communication (IC) and define integrated communications as “*the notion and the practice of aligning symbols, messages, procedures and behaviours in order for an organisation to communicate with clarity, consistency and continuity within and across formal organisational boundaries*”. This perspective is in line with the concept of ‘one voice’ as defined by Phelps and Johnson (1996) as one of three conceptualisations of integrated marketing communication IMC (in addition to ‘integrated communications’ and ‘coordinated marketing communication campaigns’).

Owing to the acknowledged importance of interaction between internal and external stakeholders (e.g. employees and customers) with regard to image formation (c.f. Kennedy, 1977), various researchers (e.g. Abratt, 1989; Barich and Kotler, 1991; Bernstein, 1984; Dowling, 1986; Gray and Smeltzer, 1987; Schmitt et al, 1995) have focused on the role of the communication of corporate identity internal and external to the organisation (Balmer, 2001a). This perspective is emphasised by Bernstein (1984) arguing that organisations need to communicate with all their stakeholders.

In addition, Balmer (2001a) refers to the extended concept of total corporate communication, which has been defined by Balmer and Gray (1999) as consisting of three categories: (1) primary communication (i.e. communication effects of products and of corporate behaviour), (2) secondary communication (i.e. Van Riel’s (1995) corporate communication mix), and (3) tertiary communication (i.e. uncontrolled communication such as word-of-mouth and information about the organisation from third parties).

With regard to the integrated communication paradigm, Balmer (2001a) refers to congruency of vertical and horizontal communication, defining vertical communication as referring to corporate communication, corporate actions, performance, behaviours, and third parties, whereas horizontal communication additionally refers to congruency of communication over time (Balmer, 2001a).

However, the key objective of integrated communication is to achieve high consistency in corporate communication activities (Bernstein, 1984; Simões et al,

2005) and to ensure that the identity of an organisation is perceived as it was intended (Abratt, 1989). Simões et al (2005:156) argue that strategic alignment of all communication efforts (i.e. integrated communication) based on the mission and philosophy of the organisation “*minimizes the likelihood of contradictory messages*”. Consequently, by avoiding mismatching cues of the identity possible gaps between the perceived image and reality can be closed (Abratt, 1989). Moreover, Gray and Schmeltzer (1987) argue that strategic communication programmes can build a strong image and Simões et al (2005) argue that integrated internal and external communication can lead to competitive advantage.

2.4.3 The Marketing Paradigm

The marketing paradigm puts external stakeholders (e.g. consumers) in the limelight and considers corporate image as a managed projection of corporate identity, thus taking an external perspective on the concept of corporate identity (Balmer, 1998). A great extent of the early work by a variety of marketing scholars (e.g. Bolger, 1959; Boulding, 1956; Easton, 1966; Harris, 1958; Hill, 1962; Martineau, 1958; Nelson, 1962; Newman, 1953; Spector, 1961; Swanson, 1957; Tucker, 1961) has focused on the external perspective and consequently various definitions reflecting the external marketing perspective have been put forward. Spector (1961:47) for instance defines corporate image as “*the sum total of [peoples'] perceptions of the corporation's personality characteristics*” and Gronroos (1984:39) argues that corporate image is “*the result of how consumers perceive the firm*”. Moreover, Abratt (1989:68) refers to Bernstein (1984) who argues that “*image is not what the company believes it to be, but the feelings and beliefs about the company that exist in the minds of its audiences and which arises from experience and observation*”.

By stressing the external viewpoint, the marketing paradigm takes a receiver-oriented perspective (Bromley, 1993), since corporate image is considered to reflect the sum of images held by external audiences as a projective interpretation of the identity of the organisation (Hatch and Schultz, 1997). Moreover, the external perspective of the marketing paradigm is accentuated by Grunig (1993) who argues that the marketing literature examines corporate image by taking the perspective of the receiver of the

messages (Balmer, 1998). Similarly, Christensen and Askegaard (2001) argue that some authors associate corporate identity with the sender side whereas the concept of corporate image is usually linked to the receiver side. This view is encapsulated by Cornelissen (2000:120), pointing out that “*an image is a perception of a receiver of his or her received projection of the corporate identity [...]*”

In addition, marketing academics (e.g. Bernstein, 1984) claim that managing corporate image aims to establish positive impressions at external stakeholders, thus arguing that corporate image can be constructed and controlled by the organisation and be transferred to external stakeholders (Hatch and Schultz, 1997). Owing to this view, the marketing perspective emphasises the role of company-controlled communicators based on the corporate identity mix (e.g. visual logos, advertising, financial reports, and employee behaviour) which is in line with Balmer (2001a) who argues that corporate brands are not communicated through marketing communication mix, but via total corporate communication. Balmer and Gray (2003:989) clearly advocate this position when pointing out that “*a corporate brand needs [...]; congruent total corporate communication (congruent over space and time), [...]*”.

Simões et al (2005) assert that the marketing perspective is strongly related to the branding literature and emphasize the intersection of brand (identity) and corporate identity. This relation is particularly evident when the branding concept is applied to an organisation (i.e. corporate branding) (Simões et al, 2005). In particular, Schmitt and Pan (1994) have argued that corporate identity and branding are synonymous at the corporate level. However, the relation between corporate identity and corporate branding has stimulated various marketing academics to apply a branding or marketing perspective to the concepts of identity and image (e.g. Balmer, 1995; 2001a; Balmer and Gray, 2003; Bickerton, 2000; Knox and Bickerton, 2003; McDonald et al, 2001; Simões et al, 2005).

Corporate identity and corporate image from a marketing perspective also have been linked to the positioning strategy. In order to establish a desired identity in the stakeholders' mind (i.e. corporate image) Van Riel and Balmer (1997) argue that

organisations can apply positioning strategy and corporate branding. Moreover, the management of corporate brands, which Balmer (1995) calls ‘strategic corporate identity management’, is considered to be crucial in an increasing competitive business environment. By positioning the whole organisation, companies can build strong corporate brands, thus gaining valuable differentiation (Balmer, 1995; Hatch and Schultz, 2003). Moreover, Hatch and Schultz (2003:1049) stress the role of organisational values in order to establish a strong corporate brand by arguing that “*successfully managing the corporate brand also involves reaching inside the corporation to better project and communicate organisational values to external stakeholders*”.

The influential study by Kennedy (1977) has emphasised the role of employees in the image formation process. Subsequently, marketing academics have emphasised the role of internal stakeholders (i.e. employees) in relation to corporate brands (e.g. Balmer, 2001a; De Chernatony and Harris, 2000; Keller, 1999) namely that employees (i.e. employee’s behaviour) act as a communicator of messages to external audiences. Harris and De Chernatony (2001:441) have stressed the linkage between employees’ perception of their organisation and brand performance, arguing that “*employees constitute the interface between a brand's internal and external environments and can have a powerful impact on consumers' perceptions of both the brand and the organisation*”. By introducing the concept of ‘brand mantras’ (i.e. short phrases that encapsulate the brand) Keller (1999:50) highlights the importance of internal brand positioning in order to develop internal brand support, and emphasises the significance of “*how to empower employees so that they can add value and equity to brands*”. Furthermore, De Chernatony and Harris (2000) argue that the corporate image (i.e. external perception) is influenced by employees, and consequently, a high degree of congruency between the organisational identity and the employees’ perception of the identity has been claimed to be crucial in creating a strong corporate brand.

2.4.4 The Organisational Paradigm

In contrast to the marketing perspective, which emphasises corporate image as an external projection of corporate identity, organisational behaviourists (e.g. Albert and Whetten, 1985; Ashforth and Mael, 1989; Bergami and Bagozzi, 2000; Dutton and Dukerich, 1991; Dutton et al, 1994; Elsbach and Kramer, 1996; Foreman and Whetten, 2002; Gioia et al, 2000; Gioia and Thomas, 1996; Hatch and Schultz, 1997; 2004; Whetten and Godfrey, 1998; Whetten and Mackey, 2002) focus on the internal relation between employees and the organisation, based on organisational commitment (Foreman and Whetten, 2002) and organisational identification (Ashforth and Mael, 1989; Dutton et al, 1994).

Since organisational identity has been defined according to the beliefs that are central, enduring and distinctive to the members of an organisation (Albert and Whetten, 1985; Hatch and Schultz, 1997; Whetten and Mackey, 2002), the organisational paradigm advocates the importance of the relationship between employees and their organisation, since employees' perception about their organisation play an important role in image formation and identity management (Kennedy, 1977). According to Balmer and Wilson (1998:13) organisational behaviour academics refer to identity "*as the way that personnel identify with the organization*".

The organisational perspective emphasises the importance of how employees perceive their organisation (i.e. perceived organisational identity) (Brown et al, 2006; Dutton et al, 1994) in relation to what they think how outsiders perceive their organisation (i.e. construed external image) (Dutton et al, 1994). Based on these two types of perception, members of an organisation are attached to and identify with the organisation. Dutton et al (1994:239) refer to this process as organisational identification, defining it as "*the degree to which a member defines him- or herself by the same attributes that he or she believes define the organisation*".

The organisational studies perspective draws on the social identity theory, which postulates that organisational identification is a form of social identification

(Ashforth and Mael, 1989; Simões et al, 2005). Social identity scholars (e.g. Tajfel, 1982; Turner, 1982) argue that people define themselves and others in relation to social or demographic categories (e.g. gender, race, ethnicity, religion, occupation), which provides self-definition “*through a sense of oneness, or identification with a particular group*” (Foreman and Whetten, 2002:619). Accordingly, Ashforth and Mael (1989) have conceptualised organisational identification as a “*subtype of social identification*” (Foreman and Whetten, 2002:619). Thus, social identification can be linked to employees’ aim to identify with their organisation in order to define a self-concept, which is supported by Elsbach and Kramer (1996:446) who refer to the concept of social identities of individuals as “*a measure of their self-concept defined by their associations and affiliations with various social groups*”.

Members’ attachment with the organisation and thus organisational identification can be strengthened if members believe that the construed external image is attractive, i.e. “*it contains attributes that distinguish the organization in positive, socially valued terms*” (Dutton et al, 1994:250). Similarly, Bergami and Bagozzi (2000) argue that a positive organisation prestige strengthens organisational identification (Simões et al, 2005). Furthermore, Foreman and Whetten (2002) refer to the ‘identity comparison process’ when they argue that consistency between perceived organisational identity (i.e. employees’ own perception of the organisational identity) and construed organisational identity (i.e. employees’ interpretation of the external view on the organisation) has a positive effect on members’ identification (i.e. organisational identification) as well as strengthening member commitment.

Scott and Lane (2000) stress the role of managers in creating organisational identity based on their public visibility and their access to resources, which are needed to execute and establish organisational identity (Simões et al, 2005). Scott and Lane (2000) focus on a manager-stakeholder perspective, arguing that organisational identity derives from iterative interactions between managers and stakeholders (i.e. groups and individuals, including employees, customers, suppliers, shareholders). In addition, Simões et al (2005) assert that the task of senior managers includes defining corporate values and goals, which are consensually accepted among employees, leading to collective organisational identity. Similarly, Hatch and Schultz (1997)

argue that behaviour and communication of top managers have an effect on organisational identity and image.

2.4.5 The Interdisciplinary Paradigm

Corporate identity has been widely acknowledged as a multifaceted construct and the management of corporate identity has been related to various disciplines (Balmer, 1995; 1998; 2001a; Chajet, 1989; Simões et al, 2005). Van Riel and Balmer (1997:341) point out that academics increasingly argue that “*corporate identity refers to an organization’s unique characteristics which are rooted in the behaviour of members of the organization*”. According to Van Riel and Balmer (1997) the concepts of corporate identity has been broadened, based on influential work by authors such as Olins (1978) and Birkigt and Stadler (1986). Birkigt and Stadler (1986) defined the corporate identity mix as consisting of behaviour, communication and symbols. Schmidt (1995) argues that the mix comprises five elements namely (1) corporate culture, (2) corporate behaviour, (3) market condition and strategies, (4) products and services, (5) communication and design (Balmer, 1998).

Due to the multidisciplinary nature of corporate identity, various definitions of corporate identity have been put forward (Melewar, 2003). However, corporate identity management can be defined as how an organisation is conveying corporate identity cues to internal and external stakeholders through strategically planned visual identity, communication and behaviour of an organisation (Van Riel, 1995; Van Riel and Balmer, 1997).

Referring to the multifaceted character of corporate identity, Simões et al (2005) stress that investigating just one discipline would provide limited insight to the construct. In a similar way, Van Riel and Balmer (1997) stress the link between corporate identity management and corporate strategy, which requires a multidisciplinary approach. Consequently, based on the multifaceted character of corporate identity, corporate identity management and corporate image formation, the perspective of the interdisciplinary paradigm emphasises the integration of various disciplines and aims to harmonise the graphic design, organisational studies,

and marketing perspectives (Simões et al, 2005) as well as the need for marshalling the corporate identity mix (Van Riel and Balmer, 1997).

Van Riel and Balmer (1997) stress the contributions of several authors in this field (e.g. Abratt, 1989; Albert and Whetten, 1985; Balmer, 1995) and Simões et al (2005) refer to academics that have advocated an interdisciplinary perspective (e.g. Balmer, 2001a; Hatch and Schultz, 1997; Moingeon and Ramanantsoa, 1997; Van Riel and Balmer, 1997). Owing to the multifaceted corporate identity construct, the International Corporate Identity Group (ICIG) has acknowledged this interdisciplinary perspective and has published the following “Strathclyde Statement”, which reflects this view (Balmer, 2001a:291; Van Riel and Balmer, 1997:355).

“Every organization has an identity. It articulates the corporate ethos, aims and values and presents a sense of individuality that can help to differentiate the organization within its competitive environment.

When well managed, corporate identity can be a powerful means of integrating the many disciplines and activities essential to an organization’s success. It can also provide the visual cohesion necessary to ensure that all corporate communications are coherent with each other and result in an image consistent with the organization’s defining ethos and character.

By effectively managing its corporate identity an organization can build understanding and commitment among its diverse stakeholders. This can be manifested in an ability to attract and retain customers and employees, achieve strategic alliances, gain the support of financial markets and generate a sense of direction and purpose.

Corporate identity is a strategic issue. Corporate identity differs from traditional brand marketing since it is concerned with all of an organization’s stakeholders and the multi-faceted way in which an organization communicates.”

The Strathclyde Statement clearly emphasises the interdisciplinary perspective by stating a number of objectives regarding corporate identity management such as communication values and beliefs, fostering individuality and generating differentiation, and achieving coherent communication and a congruent identity and image (Balmer, 2001a).

To sum up, the interdisciplinary paradigm emphasises the harmonised management of the corporate identity mix (i.e. visual identity, communication, and behaviour) and advocates the integration of the visual, marketing and organisational discipline (Van Riel and Balmer, 1997).

By reviewing the five key paradigms (i.e. visual paradigm, marketing paradigm, integrated communication paradigm, organisational paradigm and interdisciplinary paradigm) various academic perspectives that scholars have embraced on the concepts of corporate identity and corporate image have been examined. The discussion of the five paradigms indicates the attention of academics and managers alike regarding corporate identity management including the key aim of creating a positive corporate image. Owing to the fact that this research examines the auditory dimension in relation to identity management, the next section will discuss further aspects related to corporate identity management and corporate image formation.

2.5 Corporate Identity Management and Corporate Image Formation

Corporate image has been in the spotlight for many years, based on the wide consensus about the numerous benefits of a favourable corporate image for an organisation. The inventory of beneficial outcomes that has been put forward includes for instance increasing sales, generating identity for employees and enhancing morale, positively influencing investors and financial institutions and the ability to obtain financing (Gray and Smeltzer, 1987; Zinkhan et al, 2001), increasing customer loyalty (Andreassen and Lindestad, 1998), supporting recruiting (Gray and Smeltzer, 1987; Melewar et al, 2005b) and gaining competitive advantage (Zinkhan

et al, 2001). Understandably, academics have been interested in corporate identity management and the corporate image formation process (Abratt, 1989).

Starting from such early work as Newman (1953), Boulding (1956), Swanson (1957) and Harris (1958) academics and practitioners have been investigating the corporate image construct and the corporate image formation process over the last decades. Frequently, the seminal book “The Image” by Boulding (1956) is considered as a root of research in the area of corporate image (Williams and Moffitt, 1997). Boulding (1956) particularly contributed by suggesting that humans have to rely on images (Balmer, 1998) and that people do not react to reality but to their perceived reality (De Chernatony and Dall’Olmo Riley, 1997). In other words, Boulding (1956) postulated that what individuals perceive to be true is true for them (Abratt, 1989; Kennedy, 1977). Boulding (1956) also emphasised the relationship between image and behaviour (Abratt, 1989; Kennedy, 1977) and argued that based on subjective knowledge about a company individuals behave towards this company.

In addition to the examination of the image formation process, thereby setting the focus on the image construct, other academics (Balmer, 1998; Bick et al, 2003; Stuart, 1999) emphasise the role of corporate identity management as an antecedent of corporate image. Depending on the construct that is in the focus of interest (i.e. identity or image), some authors emphasise the corporate identity management aspect while others accentuate corporate image formation. In other words, while some academics tend to refer to ‘corporate image formation’ (e.g. Dowling, 1986; 1993; Kennedy, 1977; Williams and Moffitt, 1997; Zinkhan et al, 2001), or ‘corporate image management’ (Abratt, 1989), other authors highlight the role of identity and refer to ‘corporate identity management’ (e.g. Balmer, 1998; Bick et al, 2003; Markwick and Fill, 1997; Stuart, 1998; 1999; Van Rekom, 1997). Accordingly, depending on the perspective, various models that conceptualise corporate identity management and corporate image formation have been developed over the last decades.

2.5.1 The Identity-Image Interface

Besides different emphasis on either corporate identity management or image formation by various academics, what is more important, there is wide agreement that it is not image but identity that can be managed in order to generate a positive image (Stuart, 1999). For instance, Markwick and Fill (1997) argue that corporate image cannot be managed directly as it exists in the minds of stakeholders and managers can only influence image by managing corporate identity. Stuart (1999) refers to the title of Abratt's model (1989) named 'The Corporate Image Management Process' as a negative example, which illustrates this conceptual contradictory.

Despite some criticism regarding the title, the model proposed by Abratt (1989) not only remains one of the most influential models because it was noticeably different from previous models (Stuart, 1999) but also because it was the first of its kind to conceptualise the underlying key constituents of corporate image formation (Bick et al, 2003). In detail, based on the basic distinction between corporate identity management and image formation, the point where identity and image meet has been conceptualised as 'identity-image interface' (Stuart, 1999) for the first time in the model by Abratt (1989). Consequently, the model still is considered as a relevant reference (Balmer, 2001a) and has proven to be a basis for subsequent models (e.g. Stuart, 1998). Since then, the identity-image interface has been acknowledged by many authors (e.g. Balmer, 1998; Balmer and Soenen, 1999; Balmer and Stotvig, 1997; Stuart, 1998; 1999; Wilkinson and Balmer, 1996). For instance, Stuart (1999:203) refers to the identity-image interface as "*the moment of truth*" for an organisation, and asserts that it is "*the point at which the corporate identity is externalised*". In addition, the identity-image interface has been linked to the perspective that identity is internal while image is external. Van Rekom (1997) for instance expresses this view by arguing that corporate identity is located within the organisation whereas corporate image takes place in the heads of the stakeholders.

However, despite wide agreement and acceptance among academics regarding the concept of the identity-image interface, some criticism has been put forward. That is,

based on a multiple stakeholder perspective, Hatch and Schultz (1997) question the validity of the identity-image interface concept, given that boundaries and thus differentiation between internal and external decrease.

Models that conceptualise identity management and image formation, respectively, embrace a number of constructs. According to Abratt's (1989) influential model, the three basic constructs that define the image formation process are (1) corporate personality, (2) corporate identity and (3) corporate image. Markwick and Fill (1997), Stuart (1998) and Zinkhan et al (2001) strongly draw on the model by Abratt (1989) and propose a three-step model of the identity management process that includes corporate personality, corporate identity and corporate image. In a similar way, other authors have conceptualised corporate personality as an integral component of identity management and image formation models (e.g. Balmer, 1998; Bick et al, 2003; Stuart, 1998). Abratt (1989:67) defines corporate personality as "*the sum total of the characteristics of the organisation. These characteristics – behavioural and intellectual – serve to distinguish one organisation from another*". Comparably, Stuart (1998) refers to the fundamental importance of an organisation's personality and stresses the character of corporate identity as the strategic presentation of the organisation's personality and consequently defines corporate identity as an "*expression of corporate personality, based on corporate strategy*" (Melewar, 2003:207).

2.5.2 Communication in Identity Management and Image Formation

Besides the three key constructs personality, identity and image, many authors have emphasised communication as a crucial factor in their models (e.g. Abratt, 1989; Balmer, 1998; Bick et al, 2003; Dowling, 1986; 1993; Markwick and Fill, 1997; Stuart, 1998; 1999; Van Rekom, 1997; Zinkhan et al, 2001). Stuart (1999:202) argues that authors such as Abratt (1989) and Van Riel (1995) mainly consider the concept of corporate identity as a "communication-mechanism" and that corporate identity is a self-presentation through the communication of the corporate identity mix.

In general, there is broad agreement among academics that many of the communication activities take place at the identity-image interface (Balmer, 1998; Markwick and Fill, 1997; Stuart, 1998; 1999). Markwick and Fill (1997) consider organisation communication and marketing communication to function between corporate identity and corporate image. Similarly, Van Rekom (1997) stress the role of communication activities at the identity-image interface. That is, Van Rekom (1997:411) argues that corporate communication, which according to Van Riel (1995) includes management, organisational and marketing communications, has the purpose of achieving a “*certain desired corporate image among target groups*” and postulates that organisations are responsible for the corporate image, since image is an interpretation of the identity conveyed by the organisation (Bick et al, 2003). Dowling (1993:104) also emphasises the role of communication aspects and marketing communication in particular as a means to communicate from the internal to the external, that is, to “*project its 'ideal self-image' to both internal and external people*”.

Overall, the importance of communication in identity management is indicated by Van Riel’s (1995:26) definition of corporate communication as “*an instrument of management by means of which all consciously used forms of internal and external communication are harmonized as effectively and efficiently as possible, so as to create a favourable basis for relationships with the groups upon which the company is dependent*”.

Moreover, with regard to the concept of corporate communication as a basic component of identity management and image formation, various authors have referred to the distinction between controlled and uncontrolled communication (Alessandri, 2001; Balmer, 2001a; Balmer and Gray, 1999; Bhattacharya and Sen, 2003; Cornelissen, 2000; Karaosmanoglu and Melewar, 2006; Markwick and Fill, 1997; Melewar and Karaosmanoglu, 2006; Simões et al, 2005; Williams and Moffitt, 1997; Zinkhan et al, 2001). Zinkhan et al (2001) for instance argue that image formation is influenced by factors that can be controlled by the company (e.g. corporate personality and identity, corporate advertising, brand image, public relations, employee behaviour, web sites) and communication that cannot be

controlled (e.g. industry image, country of origin image, word of mouth, press reports).

The differentiation between controllable and uncontrollable communication also has been conceptualised by Balmer and Gray (1999) as part of their concept of total corporate communication that includes primary, secondary and tertiary communication. While primary and secondary communication embraces factors that can be controlled by the organisation, tertiary communication refers to uncontrolled communication such as word-of-mouth and information about the organisation from third parties (Balmer, 2001a; Balmer and Gray, 1999) (See Section 2.4.2). Markwick and Fill (1997) place both types of communication at the identity-image interface, thus arguing that not only controlled communication but also uncontrollable factors can influence image formation. Moreover, Markwick and Fill (1997) add a further dimension by arguing that corporate image not only is based on planned and unplanned communication but also is influenced by perceptual stimuli based on environmental factors such as actions of competitors or industry developments.

Similarly, Williams and Moffitt (1997) suggest that image is a product of multiple organisational (controlled) as well as personal and environmental (less or uncontrolled) factors. Therefore, based on the perspective that image is based on the sum of all information available to the audience including “*informal, unpredictable and even coincidental*” messages, Williams and Moffitt (1997:255) define corporate image as a multidimensional construct.

However, although less-controlled or uncontrolled factors influence image formation, Williams and Moffitt (1997) have put forward some empirical evidence for the dominant role of company-controlled factors (e.g. advertising) with regard to the formation of corporate image (Cornelissen, 2000). Moreover, Bhattacharya and Sen (2003) emphasise that organisations can exert greater control over communication that is originated internally (e.g. corporate communication) than over external communicators (e.g. media) (Simões et al, 2005). This perspective might account for some of the interest of academics in the dimensions of corporate identity management that can be internally controlled by managers such as corporate visual

identity and corporate communication (e.g. Balmer, 2001a; Balmer, 2001b; Simões et al, 2005).

Moreover, consistency has been widely acknowledged to be a key aspect of corporate identity management and corporate communication in particular (Balmer and Wilson, 1998; Bernstein, 1984; Van Riel, 1995). Markwick and Fill (1997) for instance argue that corporate image can only be influenced by the management of consistent identity cues. Similarly, Van Riel (1995) asserts that “*all forms of communication are taken into consideration for potential orchestration into a coherent whole*”. This view also reflects the concern about possible inconsistency of corporate identity and corporate image (i.e. identity-image gap). Abratt (1989:68) asserts on this subject that “*what is crucial to the successful communication of corporate identity, so that the perceived image does reflect reality, are consistency and congruency*”. Hence, consistent communication is considered as an important means to close or at least to narrow possible identity-image gaps (Van Riel and Balmer, 1997) and to achieve a maximum of congruency between the actual and the ideal identity (cf. Balmer, 2001b).

Consistent dissemination of identity cues is a fundamental aspect of identity management and accordingly of image formation. In other words, company-controlled communication (i.e. corporate communication) that is consistent and congruent in all channels, hence, emphasising the integrated communication paradigm (See Section 2.4.2), is considered to be an integral part of identity management.

In the previous sections, key aspects of corporate identity management and image formation such as the identity-image interface (e.g. Abratt, 1989; Balmer, 1998; Bick et al, 2003; Markwick and Fill, 1997; Stuart, 1998; 1999), the distinction between controlled and uncontrolled communication (Balmer and Gray, 1999) and the importance of consistent and integrated communication (Van Riel and Balmer, 1997) have been discussed in order to provide additional insight into research area.

Overall, a wide range of literature in the corporate identity and corporate image area has been reviewed in order to establish a solid foundation for this research. The following table (Table 2.11) presents key authors and contributions in the corporate identity and corporate image area in chronological order.

Table 2.11 – Key Authors and Contributions in Identity and Image Literature

(Newman, 1953)	<ul style="list-style-type: none"> ▪ Characteristics of corporations can be linked to human personality. ▪ The character of a company is shaped by tangible resources as well as the basic objectives regarding role or niche within its industry, emphasis on dynamic or stability, role of business citizen, type of administration.
(Boulding, 1956)	<ul style="list-style-type: none"> ▪ Individuals do not react to reality but to perceived reality. ▪ What individuals perceive to be true is true for them. ▪ Based on subjective knowledge about a company (i.e. image) individuals behave towards this company.
(Swanson, 1957)	<ul style="list-style-type: none"> ▪ Takes a consumer perspective, promoting the “ideal” corporate image.
(Harris, 1958)	<ul style="list-style-type: none"> ▪ Defines seven types of image (corporate image, institutional image, product line image, product image, brand image, diffused image, consumer demand image).
(Martineau, 1958)	<ul style="list-style-type: none"> ▪ A company has many (seven) different audiences (i.e. shareholders, consumers, potential customers, employees, vendors, suppliers and neighbours) and consequently more than one corporate personality (i.e. corporate image). ▪ There is a difference between tangible (functional) aspects (i.e. quality, reliability, service, and price) and subjective (emotional) dimensions (i.e. “feeling tone”) linked to the corporate image. ▪ All symbols that express the character of a company should be expressive, distinctive and congruent.
(Bolger, 1959)	<ul style="list-style-type: none"> ▪ Proposed a method for image measurement (“Company Image Profile”) by using trait cards
(Martineau, 1960)	<ul style="list-style-type: none"> ▪ Corporate image is conglomerate of various attitudes held by various audiences.
(Tucker, 1961)	<ul style="list-style-type: none"> ▪ Public images about mainly large corporations are stereotypes
(Spector, 1961)	<ul style="list-style-type: none"> ▪ Corporate image is the sum of perceptions of the corporation’s personality characteristics. ▪ Corporate image can be measured by six personality

	related factors (dynamic, co-operative, business-wise, character, successful, and withdrawn) (Spector, 1961:49-50).
(Hill, 1962)	<ul style="list-style-type: none"> ▪ As a direct response to Tucker (1961), corporate images are general not stereotypes but present “<i>distinct corporate personalities</i>” (Hill, 1962:75).
(Nelson, 1962)	<ul style="list-style-type: none"> ▪ Proposes seven principles for influencing image formation of consumers.
(Easton, 1966)	<ul style="list-style-type: none"> ▪ Based on an empirical study, the author concludes that corporate image is based on collective impressions of many people of the firm, which are obtained through personal contacts with the firm, through hearsay, through mass communication, and psychological predispositions. ▪ There is a distinction between corporate image (based on impression but not behaviour of the organisation) and corporate character (style) (based on the firm’s behaviour). ▪ Consistency between the projected image and behaviour of organisation is crucial for effective image campaign.
(Pilditch, 1970)	<ul style="list-style-type: none"> ▪ The author proposes a clear distinction between identity and image. ▪ Corporate visual identity should be centrally controlled. ▪ There should be a strong connection between the visual identity and the characteristics of the organisation.
(Kennedy, 1977)	<ul style="list-style-type: none"> ▪ Partially based on empirical data, employees are considered to play a key role in the image formation process. Consistent image of external stakeholders depends on consistency of the image formed by employees. ▪ Underling company policies (introduced by top management) play a greater role for image formation than advertising campaigns. ▪ Company policies transmitted through internal communication lead to personnel perception of the company, which leads to external perception of the company, because of the interaction between internal and external stakeholders. ▪ This process also works reverse from external audiences to the company criteria (policies).
(Olins, 1978)	<ul style="list-style-type: none"> ▪ Corporate personality is the centre of identity (cf. Newman, 1953) and image is an expression of corporate personality. ▪ In the early years of an organisation, identity is strongly linked to the identity of the founder(s). ▪ Constant communication (internally and external) is key for managing corporate image.

	<ul style="list-style-type: none"> ▪ Corporate identity and corporate brands can be categorised as monolithic, endorsed or branded.
(Bernstein, 1984)	<ul style="list-style-type: none"> ▪ Organisations have personalities, but they do not develop like human personalities, for two reasons. Firstly, factors such as customers, suppliers, colleagues, and the market place can influence personality and secondly, the personality of an organisation can be controlled largely by initially defining the organisation's purpose, values and ways of operation. ▪ Corporate identity is different from visual identity. ▪ Corporate image is formed by countless details of formal and informal signals, which are constantly communicated by a company. The formal corporate communication activities should be consistent. ▪ Image is a constructed set of impressions by a company to appeal to an audience and therefore does not have to reflect reality. ▪ Corporate image is about the feelings and beliefs of the audiences about a company based on their experiences and observations, and it is not what the company believes. ▪ Recognition of an organisation is important, as it is a prerequisite for familiarity, which can lead to favourability.
(Albert and Whetten, 1985)	<ul style="list-style-type: none"> ▪ An influential definition of organisational identities has been proposed: Organisational identity is defined as those elements within the organization, that organizational members' belief are central (the essence of the organization), enduring (a degree of sameness over time), and distinctive (distinguishes the organization from others) (Balmer and Wilson, 1998:13) (For a detailed review on CED aspects see also Van Rekom (1997:413)). ▪ Organisations can have multiple identities and images, i.e. ideographic and holographic multiplicity. Holographic multiplicity refers to multiple identities of an organisation that are commonly shared by organisation's members. Ideographic multiplicity refers to multiple identities that are associated with diverse collectives within different part of the organisation (c.f. Ashforth and Mael, 1989; Pratt and Foreman, 2000).
(Gray and Smeltzer, 1987) (See also Gray and Smeltzer, 1985)	<ul style="list-style-type: none"> ▪ Increased competition requires more differentiation, which can be achieved by strategically planned and implemented desired corporate image. ▪ Planned corporate image programme should reflect the organisation's mission and strategies, and can lead to desired individuality and uniqueness.

	<ul style="list-style-type: none"> ▪ Corporate image is defined as “outsider's view of a corporation” and is related to various audiences. The corporate image needs to be conveyed consistently to all audiences in order to avoid confusion among various audiences. ▪ The following steps are included in a corporate image program: (1) articulate present strategy, (2) determine image, (3) determine communication objectives, (4) determine communication plan, and (5) program implementation.
(Dowling, 1988)	<ul style="list-style-type: none"> ▪ The author revives measuring methods of corporate image, and distinguishes between attribute-based and non-attribute-based methods. ▪ The authors refers to Dichter (1985) who refers to two processes of image formation, namely halo effects and simple inference. ▪ The author supports the view that a company does not have one but multiple images. ▪ The author subsequently describes a variety of attributes to measure corporate images, followed by a range of statistical procedures, which can be used to generate a holistic summary from the measured attributes. ▪ Attributes have to be customised according to the described company. ▪ Corporate images might be determined by “super and subordinate” images, i.e. hierarchical set of images (e.g. country of origin, industry image, and brand image). ▪ The author in addition refers to the alternative way of isolating a set of attributes that describe the company’s (dis)similarity in relation to competitors or the “ideal” company.
(Abratt, 1989)	<ul style="list-style-type: none"> ▪ Corporate Image Management Process consists of three key steps (concepts): “Corporate Personality”, “Corporate Identity” and “Corporate Image”. ▪ Consistency and congruency are important factors when communicating identity, in order to achieve a perceived image that reflects the identity.
(Peter, 1989)	<ul style="list-style-type: none"> ▪ The author reflects on the design aspects of magazine cover logos. Reasons for changing and adapting cover logos are presented. It is argued that cover logos of magazines represents product image and identity as much as any corporate logo.
(Chajet, 1989)	<ul style="list-style-type: none"> ▪ Corporate identity is the most visible element of a company’s strategy. ▪ The image of a company is mainly shaped by its visual elements. ▪ A favourable image can attract various stakeholders such

	<p>as analysts, investors, customers, partners and employees.</p> <ul style="list-style-type: none"> ▪ Changes in the business strategy need to be reflected by an adapted corporate identity / corporate image.
(Smith, 1990)	<ul style="list-style-type: none"> ▪ Identity refers to capability such as “<i>knowledge, experience, skills, expertise and attitude</i>” (Smith, 1990:32) and provides information about the culture, values and norms of a corporation. ▪ Identity is linked to the visual cues of an organisation. ▪ Identity management needs to be consciously and consistently and can lead to strategic advantage.
(Dowling, 1993)	<ul style="list-style-type: none"> ▪ Companies have many images since each person holds their own image, which is a fundamental principle of corporate identity management. ▪ Ideal images, which can become an asset, can be built and managed. Corporate image is a key element in the image formation process, since such statements provide common goals as a focal point for corporate strategy and employee activities. ▪ Consistent signals to external audiences, based on an organisation’s culture, is the most important element regarding corporate images. ▪ Marketing communications is defined as “<i>an attempt by the organization to project its 'ideal self-image' to both internal and external people</i>” (Dowling, 1993:104), and often is the most visible activity. ▪ Identity symbols (name, logo/symbol, tag line, typeface, and colours) enable external audiences to recognise the organisation and to recall the corporate image. ▪ Interpersonal communication is a very influential way of influencing image formation, compared with company-initiated communication. ▪ Comparative image analysis can reveal possible misfit between images held by different stakeholders. It can then be used to identify factors that need to be changed. ▪ Four approaches for building corporate image (pathfinder, commander, change, and vision) are presented.
(Dutton et al, 1994)	<ul style="list-style-type: none"> ▪ Two types of organisational images, (1) ‘perceived organisational identity’ and (2) ‘construed external image’, influence the ‘cognitive connection’ (i.e. organisational identification) of employees with their organisation. ▪ Organisational identification is determined by the degree of attributes by which a member of an organisation defines himself and believes defines the organisation. ▪ ‘Perceived organisational identity’ (individual level) is

	<p>defined, as what a member of an organisation believes is distinctive, central and enduring to the organisation, whereas ‘organisational reputation’ refers to what outsiders belief is distinctive, central and enduring to the organisation.</p> <ul style="list-style-type: none"> ▪ ‘Construed external image’ refers to what a member of an organisation believes what outsiders believe about the organisation. ▪ The degree of attractiveness of ‘perceived organisational identity’ and ‘construed organisational image’ determines the level of organisational identification. ▪ The attractiveness of the ‘perceived organisational identity’ and the ‘construed organisational image’ is based on three aspects of self-definition, (1) self-continuity, (2) self-distinctiveness, (3) self-enhancement.
(Schmidt, 1995)	<ul style="list-style-type: none"> ▪ Corporate identity mix consists of five elements: (1) corporate culture, (2) corporate behaviour, (3) market condition and strategies, (4) products and services, (5) communication and design. ▪ The management of corporate identity is an important instrument to achieve a desired image and to gain competitive advantage. ▪ Corporate identity programmes and corporate visual identity can lead to financial benefits for organisations (e.g. attract investors, achieve price premium). ▪ The majority of British managers (44%) associate corporate identity only with the visual dimension (i.e. visual identity) of an organisation, whereas only a minority (4%) associate identity with culture, values and philosophy.
(Schmitt et al, 1995)	<ul style="list-style-type: none"> ▪ The authors stress the importance of corporate aesthetic management and provide examples of sensory experience in relation to product and service companies. ▪ Sensory dimensions such as visual and sound communication are related to the expression of an organisation’s culture and values and corporate aesthetic management is linked to various benefits such as making marketing communication activities more effective and efficient, increasing sales, supporting differentiation and price premium, improving corporate image, and providing competitive advantage. ▪ The authors provide a systematic, comprehensive and strategic framework of corporate aesthetics management (CAM), thereby defining aesthetics in the broadest sense including visual and other aesthetic areas that “<i>have the potential of providing aesthetic gratification</i>” (Schmitt et al, 1995:83). ▪ The framework includes the following four stages: (1)

	<p>Situation analysis (2) Designing the aesthetics-strategy (3) Building the collection of design elements (4) Aesthetics quality control. In order to identify the exiting situation (stage 1), the authors recommend to follow the four Ps of aesthetics management (properties, products, presentations, publications).</p>
(Van Heerden and Puth, 1995)	<ul style="list-style-type: none"> ▪ Corporate personality determines corporate identity, which constitutes corporate image. ▪ Corporate personality is a set of behavioural and intellectual characteristics. ▪ Personality and corporate identity is projected by visual elements and behaviour, forming an overall corporate image. ▪ Image can be recalled by visual elements but is formed by corporate behaviour. ▪ Image and brands will play a key role for customers to differentiate between companies. ▪ Corporate image can lead to individuality that leads to high awareness, loyalty and positive reputation. ▪ Corporate logos can create ‘measurable images’.
(Hatch and Schultz, 1997)	<ul style="list-style-type: none"> ▪ The concept of organisational identity is referring to the identification of employees with the organisation. ▪ Organisational identity is embedded in corporate culture. ▪ Corporate culture constitutes the context that shapes corporate identity. ▪ The concepts of corporate identity and image are multidisciplinary. ▪ Boundaries between internal and external aspects of organisations are increasingly blurred, because of growing interaction between internal and external stakeholders and because stakeholders belong to various groups. ▪ Behaviour and communication of top management strongly affect corporate identity and corporate image. ▪ Marketing and organisational communications provide a link between image and strategic management.
(Van Riel and Balmer, 1997)	<ul style="list-style-type: none"> ▪ Provide classification of corporate identity based on three paradigms (graphic design paradigm, integrated communication paradigm, interdisciplinary paradigm). ▪ Present methods to reveal actual corporate identity (Laddering technique, Balmer’s affinity audit, Rotterdam Organisational Identification Text (ROIT)). ▪ Revealing desired corporate identity can be done by using the Spiderweb method (Bernstein, 1984) and determining desired corporate identity is linked to positioning and corporate branding. ▪ The “International Corporate Identity Group’s (ICIG)

	<p>statement on corporate identity“, the so-called “Strathclyde Statement” is presented.</p>
(Williams and Moffitt, 1997)	<ul style="list-style-type: none"> ▪ An empirical study identified three factors (organisation-controlled, personal and business) that affect the overall image. ▪ Overall image was measured by a combination of three types of images (personal image, community image, and industry image). However, statistical tests showed that the three images were not distinct and were highly interrelated. ▪ Research showed that company-controlled factors strongly account for the formation of corporate image. Less-controlled or uncontrolled factors also influence image formation and image formation will be based on the sum of all information available to the audience. ▪ Based on the informal, unpredictable and even coincidental factors corporate the overall image is conceptualised as an impression formation process and as a multi-dimensional construct.
(Van Rekom, 1997)	<ul style="list-style-type: none"> ▪ Corporate identity is defined as “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” (Van Rekom, 1997:411). ▪ In order to measure corporate identity, the factors that constitute ‘centrality’ within the organisation should be revealed. ▪ In order to reveal ‘centrality’ a laddering technique that generates a hierarchical value map, based on means-end interviews is proposed. ▪ Centrality in the means-end structure of organisation is revealed accordingly to the commonly performed activities that are specific to the organisation. ▪ The criterion of ‘centrality’ is assumed to subsume the three CED criteria (i.e. central, enduring, distinctive) as proposed by Albert and Whetten (1985). ▪ Investigating the central concepts in the network of organizational means-end chains reveals the criterion of “centrality” (i.e. the essence of the organisation). <i>“Operationally, centrality to the organization means centrality in the network of means-end relations among organizational activities”</i> (Van Rekom, 1997:421).
(Baker and Balmer, 1997)	<ul style="list-style-type: none"> ▪ The authors argue that the objective of corporate identity management is “to acquire a favourable corporate image among an organisation’s key stakeholders which, over time, results in the acquisition of a favourable corporate reputation which leads to key stakeholders having a favourable disposition towards an organisation resulting

	<p>in a propensity to buy an organisation's products and services, or to work, invest or trade with the company" (Baker and Balmer, 1997:369).</p> <ul style="list-style-type: none"> ▪ Based on a case study (Strathclyde University), the significance of visual identity, as the symbolic element within the corporate identity mix, is investigated in relation to the other elements of the identity mix. That is, the development and implementation of a new visual identity is presented. Visual identity is often the most prominent aspect of an organization's change of identity. ▪ By doing a visual audit, which is considered as a valuable research tool, the importance that visual identity makes to strategy formulation is highlighted. ▪ A weak visual identity is claimed to be an indication of weaknesses in one or more of the following areas: corporate strategy, corporate culture and formal corporate communications policies. ▪ The authors claim, that "<i>everything an organization says, makes and does will 'communicate'</i>" (Baker and Balmer, 1997:367).
(Markwick and Fill, 1997)	<ul style="list-style-type: none"> ▪ Review of the concepts of corporate identity, corporate image, corporate reputation and corporate personality is presented. ▪ Stakeholders have different images and image is considered as "<i>the totality of stakeholders' perceptions of the way an organization presents itself</i>" (Markwick and Fill, 1997:398). ▪ Corporate image can be based on planned communication (e.g. public relations) or accidental/unplanned communication (e.g. media comments). ▪ Images are also influenced by factors and perceptual stimuli that cannot be influenced by the organisation (environmental influences) such as actions of competitors, industry/sector developments and other environmental factors. ▪ Based on the two types of communication, image cannot be managed directly, but can be influenced by the management of the corporate identity, i.e. by presenting consistent identity cues. ▪ A model of corporate identity management process (CIMP) is presented, emphasising the link between image and strategic management. ▪ Based on a case study where the CIMP was applied, it is concluded that by understanding the images of key stakeholders and thus getting feedback regarding their image, communication strategies can be adjusted or developed.

<p>(Moingeon and Ramanantsoa, 1997)</p>	<ul style="list-style-type: none"> ▪ The authors investigate the corporate identity concept as developed by the French School argue that identity is related to corporate image as it addresses internal images that employees have about the organisation. ▪ Culture is defined as the visible part, i.e. symbolic products as visible manifestation of the organisational imagery. The organisational imagery is defined as a <i>set of “basic assumptions impulses and values which govern (not necessarily consciously) the behaviours of organization members”</i> (Moingeon and Ramanantsoa, 1997:386). ▪ The authors discuss methods of diagnosing corporate identity by observing the visible part of the organization (symbolic products) and the hidden part of the organisation (organizational imagery). ▪ The authors then refer to the two concepts of “habitus” and “the field”, leading to the aspect of sameness and conflict and the idea of “objective complicity” in relation to corporate identity. <i>“Thus, it is the “sameness” which opens the possibility of conflict, since the struggles for the stakes of the field are based on a complicity between agents”</i> (Moingeon and Ramanantsoa, 1997:390). ▪ Finally, the authors present and discuss “socioanalysis”, i.e. using an interviewing technique, as a methodology to identify hidden organisational imagery, the invisible part of corporate identity.
<p>(Balmer and Soenen, 1997)</p>	<ul style="list-style-type: none"> ▪ The concept of corporate identity can be divided into (1) elements comprising corporate identity (i.e. corporate identity mix), and (2) the elements required of its management (i.e. corporate identity management mix). ▪ The corporate identity mix consists of (1) soul (e.g. values, culture), (2) mind (e.g. vision, philosophy, strategy), and (3) voice (e.g. uncontrolled and controlled communication, symbolism).
<p>(Balmer, 1998)</p>	<ul style="list-style-type: none"> ▪ Chronological review of identity, based on five stages is presented. ▪ Five problems with the concept of corporate image are identified: multiplicity of interpretations, negative associations, pretended exclusive role of image communication, multiple images, and different importance of stakeholder groups. ▪ A model of corporate identity management (corporate brand management) is proposed that aims to depict clarity regarding the concepts of corporate personality, identity, image and reputation as well as various management and non-management disciplines. ▪ Extended marketing mix with 10 Ps is proposed: philosophy and ethos, personality, people, product, price,

	place, promotion, performance, perception, positioning.
(Gray and Balmer, 1998)	<ul style="list-style-type: none"> ▪ Corporate image and reputation need to be managed strategically and should be consistent. ▪ Operational process framework for managing corporate image and reputation is proposed with the objective to create favourable image and reputation. ▪ The key elements of the process are identity, communication, and image and reputation. ▪ Outcome of this process can be competitive advantage. ▪ Identity is related to what the company really is, and the management of identity includes strategy, philosophy of executives, culture and organisation design. ▪ Corporate communications is the sum of official and informal messages, and is the link between identity and image. ▪ Corporate image is what comes to the minds of stakeholders about the company when encounter the visual logo or name of the organisation. ▪ Reputation relates to a “<i>value judgement about the company’s attributes</i>” (Gray and Balmer, 1998:697). ▪ Corporate Image can be build more quickly by communication activities whereas a reputation requires more time to build up. ▪ Companies can have better reputations but a less prominent image in comparison to their competitors (e.g. local firm vs. global firm). ▪ Corporate communication is the link between corporate identity and corporate image and reputation and comprises “<i>nomenclature and branding, graphic design, formal statements, architecture, media relations, and routine interactions</i>” (Gray and Balmer, 1998:697). ▪ Continuous feedback is important for managers to make sound decisions regarding corporate identity. ▪ Image and reputation are strategic resources.
(Balmer and Wilson, 1998)	<ul style="list-style-type: none"> ▪ The authors review the literature on corporate identity and organizational identity, aiming to bridge the gap between these two areas. ▪ Within the corporate identity literature, the authors refer to three perspectives: (1) graphic design perspective (2) integrated-communication perspective (3) interdisciplinary and “cultural” perspective. ▪ In the organisational identity literature, corporate culture is considered an integral component. Three major perspectives on culture are presented: (1) integration perspective (2) differentiation perspective (3) fragmentation perspective. ▪ Based on the two areas of literature, the authors present two case studies (BBC Scotland and Bank X).

	<ul style="list-style-type: none"> ▪ The first case shows that identity formation is strongly related to affinity and that employees consider multiple identities and types of affinity. ▪ The second case shows that aspects of corporate culture, which are controllable by the headquarter, were more consistent in comparison to more inconsistent aspects on a branch level. Overall, the findings suggest that there is company wide consistency on some issues as well as inconsistent issues due to the existence of sub-cultures. ▪ From the two case studies, the authors conclude that employees connect with more than one identity and that non-corporate identities (e.g. job function, departmental/divisional culture) exist. ▪ Consequently, the authors advocate the view that identity is multifaceted and complex and that the aim of managers for a single company-wide culture is unachievable.
(Melewar and Saunders, 1998)	<ul style="list-style-type: none"> ▪ The empirical study investigates possible benefits of global CVIS standardization, senior management involvement, the degree of headquarters' control of CVIS, and how headquarters' and subsidiaries' views of CVIS standardization differ. ▪ The research linked to an aspect of organisational structure, i.e. centralisation and decentralisation and investigates based on possible tensions between headquarters and subsidiaries. ▪ Within a small sample of 40 companies, senior persons have been interviewed. The following findings have been summarised: The perceived impact on sales, consumer goodwill, consumer's familiarity, advertising awareness, market share, executive recruitment, receptivity of locals are significantly higher with highly standardized CVIS than those without. In contrast, values of shares and investment rating have not been considered by companies as a favourable outcome of standardised CVIS. Each of the hypotheses linking CVIS standardisation with strong headquarters control is supported. In addition, the role of chief executive as a driving force and the involvement of the chief executive in relation to CVIS standardisation are supported. In contrast, the view of the headquarters and subsidiaries on CVI standardisation has been shown to be similar, thus not supporting the hypotheses.
(Melewar and Saunders, 1999)	<ul style="list-style-type: none"> ▪ The study aims to examine the question of standardisation versus localization for CVI. ▪ Various antecedents to standardised CVI are tested such as: type of market (industrial products vs. service and consumer goods), market condition (homogenous

	international product market, uniform competition), corporate profile (age of company, number of subsidiaries, annual total sales), market entry strategy, host country laws and regulations, cultural diversity, local nationalism, use of local design agencies, language, translation difficulties, pronunciation difficulties.
(Balmer and Soenen, 1999)	<ul style="list-style-type: none"> ▪ Research showed that identity management mainly follows a vision approach, based on the corporate vision and articulated by CEO and senior management, and that corporate visual identity is used as the key tool to change identity. ▪ Most existing models of corporate identity management are ‘vision driven’. ▪ The ACID Test of Corporate Identity Management suggests differentiating between four types of identity in an organisation: (1) Actual identity, (2) Communicated identity, (3) Ideal identity, and (4) Desired identity. ▪ By identifying the gaps between these identities, required types of change then can be defined.
(Balmer and Gray, 1999) (Same article: Balmer and Gray, 2000)	<ul style="list-style-type: none"> ▪ Traditionally, corporate identity and corporate communication have been considered as mainly functional rather than strategic. ▪ The authors present ten environmental forces that explain the increased importance of corporate identity and corporate communications: (1) acceleration of product life cycles (2) deregulation (3) privatisation programmes (4) increased competition in the public and non-profit sectors (5) increased competition in the service sector (6) globalisation and the establishment of free trade areas (7) mergers, acquisitions and divestitures (8) shortage of high-calibre personnel (9) public expectations for corporate social responsiveness (10) breakdown of the boundaries between the internal and external aspects of organisations. ▪ The authors propose a three-step system process of corporate communication and present a new model, which articulates the corporate identity and corporate communications process.
(Stuart, 1999)	<ul style="list-style-type: none"> ▪ Based on a review of existing models of corporate image formation/corporate identity management, a “definitive model of the corporate identity management process” is proposed. ▪ The proposed model gives more attention to the concept of corporate identity management in relation to the following areas: types of corporate communication, organizational culture, the role of strategic management, the effect of organizational and corporate identity

	structures on corporate identity management, and the internal-external interface.
(Gabrielsen et al, 2000)	<ul style="list-style-type: none"> ▪ A tool for pre-testing design is proposed, which aims to distinguish between pair wise comparisons based on a holistic, emotional and low-involvement basis. The test is argued to be able to distinguish concerning the attractiveness of the designs. Furthermore, the test reveals the fit of words with the respondents' perception of the designs. Ten standardized measures derived from the (ELAM) Elaboration Likelihood Advertising Model (Hansen, 1997) have been used.
(Cornelissen, 2000)	<ul style="list-style-type: none"> ▪ Corporate image is not only based on company-controlled messages but is also based on uncontrolled messages. ▪ The traditional “inside-out” model of corporate communication (i.e. symbolism, communication, behaviour) following a linear structure is a powerful way of communication but neglects additional uncontrolled messages. ▪ Corporate image derives from the projection of a corporate identity and cognitive interpretations by the receiver. ▪ A receiver perspective model of image formation is proposed including three uncontrolled message channels: (1) news media, (2) word-of-mouth, and (3) intrapersonal messages.
(Kiriakidou and Millward, 2000)	<ul style="list-style-type: none"> ▪ The paper examines the impact of corporate identity management on employees' attitudes towards the organization. In detail, the empirical study tests the fit between actual and ideal corporate identity and investigates the effect on outcome variables (longevity with an organization, satisfaction and personal commitment to organizational goals and values). ▪ Based on qualitative research (content analysis of company documents) organisational descriptors for actual and ideal identity have been identified. Subsequently, quantitative research (questionnaire) has been used to obtain data, for testing the relationship between fit and work related outcomes. ▪ Results show discrepancies between actual and ideal identity of employees, also reflected by strong variances between departments. The authors conclude that there are sub-corporate identities and that the perceived level of discrepancy between actual and ideal identity has a negative effect on employee commitment, which can jeopardise organisational performance.
(Melewar and	<ul style="list-style-type: none"> ▪ The paper extends the existing seven Ps of service

Saunders, 2000)	<p>marketing (product, price, place, promotion, participants, physical evidence, and process) by adding an eight P for publications.</p> <ul style="list-style-type: none"> ▪ The study assumes that companies that adopt a global CVI standardisation also have a broad view of the means of projecting their image. ▪ That is, global CVIS standardisation has been hypothesised in relation to the perception of companies that various factors are considered as an effective way of projecting their identity (interior and exterior, stationery, publications, vehicles, signs, clothing, forms, advertising, packaging, promotions, products). ▪ Based on interviews with senior personnel at 40 companies, results showed a significant relationship between the degree of CVIS standardisation applied to promotional tools and belief in their effectiveness as a means of projecting their identity. ▪ In detail, for all but clothing, significant relationships between the degree of CVIS standardisation and the belief of the company in the tools as a means of projecting their identity have been shown. ▪ Overall, the findings support the view that strong CVIS standardisation provides greater effectiveness in projecting a uniform and consistent corporate visual identity.
(Melewar et al, 2000)	<ul style="list-style-type: none"> ▪ The paper presents empirical research concerned with the question of the relationship between corporate visual identity system (CVIS) and Olins' (1989) corporate visual identity structure. Moreover, the research investigates the type of business and the recognition and acceptance of corporate names in Malaysia, in relation with Olin's identity structure. ▪ Based on a corporate perspective, the research shows that many companies with operations in Malaysia apply a standardised visual identity and therefore follow a monolithic visual identity structure. The type of company was not found to be related to a more standardised visual identity i.e. monolithic identity. Moreover, the recognition and acceptance of the corporate name is positively related to a monolithic identity structure.
(Alessandri, 2001)	<ul style="list-style-type: none"> ▪ The author reviews the concept of identity from the practitioner and academic perspective and presents a list of definitions. ▪ The author then proposes a conceptual and an operational definition of corporate identity. Subsequently, a model is proposed that shows the basic elements of who identity works including key factors

	<p>such as corporate mission, corporate identity, corporate image and corporate reputation.</p> <ul style="list-style-type: none"> ▪ The model is based on two theoretical groundings: (1) theory of low involvement for the presentation of the company's identity through mass communication followed by (2) classical conditioning for the formation of a positive corporate image and reputation.
(Melewar et al, 2001)	<ul style="list-style-type: none"> ▪ The empirical study compares the views of multinational firms using a high/little degree of CVIS standardisation. ▪ In particular, the study investigates (1) the reasons for developing a standardised CVIS, (2) the behavioural issues associated with CVIS and (3) the question of selecting a graphic design agency. ▪ Nine hypotheses are proposed, which are grouped into three categories: (1) reasons for developing CVIS (2) behavioural issues associated with CVIS and (3) selecting a graphic design agency. ▪ Findings show that multinational companies adopted standardised CVI for reasons such as supporting sales, attracting employees, increasing the company's stature and presence. In addition, research suggests that interest in standardised CVI and identity strongly was motivated by restructuring, merger or acquisition.
(Balmer, 2001a)	<ul style="list-style-type: none"> ▪ There are 15 explanations for the claimed confusion regarding the concepts of corporate identity and corporate marketing (e.g. the association with graphic-design has a negative influence on the understanding of the corporate identity concept). The dominance of visual identity over non-visual senses is problematic, since non-visual senses can be as powerful as the visual dimension (e.g. Catholic Church). ▪ There is a need for a corporate focus in marketing, leading to a new area of 'corporate marketing'. The term 'business identity' is used as umbrella term for corporate identity, organisational identity and visual identity. Business identity studies comprise the core area of this interdisciplinary perspective. ▪ The author reviews various models of the identity mix (Balmer and Soenen, 1999; Birkigt and Stadler, 1986; Schmidt, 1995; Steidl and Emory, 1997) and emphasises difference between identity mix (concept and philosophy) and identity management mix (process). Accordingly, two new models of identity mix and identity management mix are proposed. ▪ The author critically reviews three key identity/image models (1989; Dowling, 1993; Kennedy, 1977). ▪ A revised version of the ACID Test, named AC²ID Test™ is proposed, embracing five types of identity,

	<p>namely (1) actual identity, (2) communicated identity, (3) conceived identity, (4) ideal identity and (5) desired identity. The aim of this multi-disciplinary model is to align all five types of identity, which can be achieved through identity change.</p> <ul style="list-style-type: none"> ▪ A new corporate marketing mix (HEADS²) with 10 Ps is proposed, including: Philosophy, Promotion, People, Personality, Product, Price, Place, Performance, Perception, and Positioning. ▪ The objectives of business identity management are criticised and nine objectives of corporate identity management are presented (reflected by the ICIG statement).
(Balmer, 2001b)	<ul style="list-style-type: none"> ▪ The paper presents the “Balmer's AC²ID Test™” (a revised version of the ACID Test (Balmer and Soenen, 1999)) which covers the five types of identity: actual, communicated, conceived, ideal, and desired identity. ▪ The key concern is that organisations should orchestrate of the five types of identity to achieve alignment. ▪ Qualitative data was gathered in order to test whether all five types of identity and all ten relations are considered during corporate identity management programmes. ▪ One of the findings was that identity consultancies only focused on one or two dimensions and that there is a dichotomy of the practitioner and academic interface. That is, practitioners focus on vision-driven future aspects related to visual identification, whereas academics tend to focus on past and present aspects related to organisational and individual values, business competence, structure, strategy, history, and communication. ▪ The proposed “Balmer's AC²ID Test™” aims to bridge the practitioner and academic perspective, and offers a guide for managers to manage identity programmes.
(Cornelissen and Harris, 2001)	<ul style="list-style-type: none"> ▪ The authors discuss the various uses of the corporate identity metaphor. They differentiate between the following three conceptualisations: (1) corporate identity as the expression of a corporate personality, (2) corporate identity as organisational reality, and (3) corporate identity as all the expressions of a company. ▪ The authors finally favour the third concept that considers identity as all corporate expression of the company.
(Zinkhan et al, 2001)	<ul style="list-style-type: none"> ▪ The authors define corporate image as based on the stakeholders’ selectively perception of company actions and associations with the industry and country. Companies do have an image whether intended (i.e.

	<p>planned and managed) or not.</p> <ul style="list-style-type: none"> ▪ Companies have various images depending on the various stakeholder groups, and perception about the company will differ between these groups, depending on the type of interaction. Key stakeholder groups are: stockholders, board of directors, employees, suppliers, channel members, customer, and community. ▪ The management of image offers various benefits such as increasing sales, developing company goodwill, generating identity for employees, positively influence investors and financial institutions, as well as community, government, special interest groups and other opinion leaders, and gaining competitive advantage. ▪ At the beginning of an identity management process (i.e. image formation), a company has to identify the desired image regarding each stakeholder group. ▪ The image formation process is influenced by two types of factors, namely the factors that can be controlled by the company (e.g. corporate personality and identity, corporate advertising, brand image, public relations, employee behaviour, web sites) and factors that can not be controlled but influenced by the company (e.g. industry image, country of origin image, word of mouth, press reports). Thus, a company is able to create and adjust its image by managing and controlling these internal factors.
(Van Riel et al, 2001)	<ul style="list-style-type: none"> ▪ The explorative study aimed to measure the effectiveness of logos, by measuring evaluation / perception of consumers before and several months after the introduction of a new corporate logo, and in comparison to two competitors. ▪ Data showed that more and broader interpretations have been made before the campaign while after several months including an advertising campaign, interpretations were richer, more concrete and more in line with the intended attributes the company wanted to communicate with the new logo. The results might indicate stronger familiarity with a logo is positively related to the accuracy of the graphical descriptions.
(Melewar and Storrie, 2001)	<ul style="list-style-type: none"> ▪ Based on the corporate identity model by Melewar and Jenkins (2002) the case study of Toni & Guy is presented, concluding that the company has gained a high degree of control over its corporate identity.
(Melewar, 2001)	<ul style="list-style-type: none"> ▪ The author presents the necessary steps in developing reliable and valid measurement scales of international corporate visual identity as a multidimensional construct,

	<p>mainly following Churchill's (1979) approach.</p> <ul style="list-style-type: none"> ▪ The construct has been defined as consisting of nine determinants: (1) demographic profile, (2) visual structure, (3) preparation site, (4) key internal driving force, (5) key motivator, (6) control, (7) global drivers (seven sub-components), (8) application (11 sub-components), and (9) perceived impact.
(Christensen and Askegaard, 2001)	<ul style="list-style-type: none"> ▪ Due to a saturation of communication and diminishing organisational boundaries (i.e. internal/external), companies increasingly consider employees as key audience for corporate communication. ▪ Corporate identity constitutes of "<i>the total sum of signs that stands for an organisation</i>" (Christensen and Askegaard, 2001:304). ▪ From a semiotic perspective, corporate image is an impression that derives from a sign or a number of signs. ▪ The relation between corporate identity and corporate image can be seen as the ongoing interpretation of signs. ▪ Corporate image and corporate identity need to be considered as "<i>social-historical simulations of organisational realities</i>" (Christensen and Askegaard, 2001:311).
(Melewar and Jenkins, 2002)	<ul style="list-style-type: none"> ▪ The paper presents a comprehensive review of literature related to the concept of identity including a variety of perspectives, including practitioner as well as academic-based definitions. ▪ Based on the literature the authors develop a holistic model of corporate identity including the following dimensions: (1) communication and visual communication (sub constructs: corporate communication, uncontrollable communication, architecture and location, corporate visual identity), (2) behaviour (sub contacts: corporate behaviour, management behaviour, employee behaviour), (3) corporate culture (sub constructs: goals, philosophies, and principles, nationality, organizational imagery and history), (4) market conditions (sub constructs: nature of the industry, corporate and marketing strategies). ▪ Finally, the authors stress the need for future development of measurement scales, in order to empirical test the identity construct, referring the procedure of scale development by Churchill (1979).
(Birkigt et al, 2002)	<ul style="list-style-type: none"> ▪ Corporate personality is at the centre of an organisation's corporate identity. ▪ Corporate identity mix consists of the three elements, (1) behaviour, (2) communication, (3) symbolism (i.e. visual identity).

(Whetten and Mackey, 2002)	<ul style="list-style-type: none"> ▪ Organisations can be seen as individual social-actors. ▪ Consequently, there is a difference between organisational identity based on shared beliefs by a group of members of the organisation and the identity of the organisation as a social actor.
(Cornelissen and Elving, 2003)	<ul style="list-style-type: none"> ▪ The authors question the direct relation between the three factors strategy, culture and structure and corporate identity management. ▪ Corporate identity management is mainly associated with a projecting perspective, and is defined as “the strategic development of a distinct and coherent image of an organization that is consistently communicated to stakeholders through symbolism, planned communications and behaviour” (Cornelissen and Elving, 2003:116). ▪ Based on literature review, the authors present an integrative conceptual framework that links dimensions of corporate identity management to situational and contextual factors. ▪ Finally, the paper points toward the need for developing measurement scales to test the proposed constructs and relations of the framework.
(Foo, 2003)	<ul style="list-style-type: none"> ▪ The relation of greater complexity of a internet logo (greater use of design elements, symbols and colours) is tested in relation to attractiveness, creativity, image of professionalism, epistemology as embedded in a logo. ▪ Results show that people are attracted to e-logos that are more complex and that complexity may enhance the perceptions of a firm as being creative and professional.
(Melewar, 2003)	<ul style="list-style-type: none"> ▪ The paper aims to provide a clear understanding of the corporate identity construct and provides the corporate identity taxonomy including corporate communication, corporate design, corporate culture, behaviour, corporate structure, industry identity, and corporate strategy. ▪ The author defines corporate identity from a projection perspective as “the set of meanings by which a company allows itself to be known and through which it allows people to describe, remember and relate to it” (Melewar, 2003:195).
(Bick et al, 2003)	<ul style="list-style-type: none"> ▪ Based on a literature review on corporate personality, identity image, reputation, and corporate branding, own definitions of these concepts are presented. ▪ The authors consider the model by Kennedy (1977) as the start of multi-disciplinary approach to image management, and point out that the Abratt (1989) model was the basis for the corporate image management process.

	<ul style="list-style-type: none"> ▪ Modification to Abratt’s (1989) models by various authors (e.g. Balmer, 1998; Balmer and Soenen, 1999; Bickerton, 1999; Markwick and Fill, 1997; Stuart, 1999) are discussed. ▪ Subsequently, an updated version of Abratt’s (1989) model is presented, which highlights the integration of all the management disciplines in the communication process, the complexity of the relationships between internal and external audiences. ▪ The model reflects the view that corporate culture and personality influences all aspects of the process, whereas strategy responds to constant feedback and is an own variable and is not part of personality. ▪ The model also differentiates between image and reputation based on time, and emphasise the need for company wide consistent communication to all stakeholders and the role of employees re image formation.
(Melewar and Vemmervik, 2004)	<ul style="list-style-type: none"> ▪ The paper reviews key literature on advertising with regard to the issue of standardisation and adaptation. ▪ Three schools of thought, namely (1) standardisation (2) individualisation/adaptation (3) compromise/contingency perspective, are discussed and benefits of the standardisation and adaptation school are presented. ▪ Moreover, external and internal factors, as presented by the literature, such as product related factors, customer segments, organisational factors, that determine the decision for one of the strategies are examined. ▪ Finally, the paper presents extensive critique of research so far, related to issues such as unclear definition of the term “standardisation”, too extreme positions of the concepts, too complex models, difficulties regarding comparison of studies, lack of assessment of value creation and financial implications.
(Van den Bosch et al, 2004)	<ul style="list-style-type: none"> ▪ Research in the corporate visual identity domain has been divided into a strategic, operational, and design level. ▪ Based on an empirical study, various measures to maintain consistent CVI are investigated. Measures have been divided into structural and cultural related measures. ▪ The questionnaire covers following parts: (1) whether the organisation uses the various measures (2) importance of measures to maintain consistent CVI (3) perceived consistency of CVI. ▪ Some of the most important results are that the number of applied organisational measures is positively related

	<p>to perceived consistency of CVI. However, no clear relationship between the use, the perceived importance, and the effectiveness of measures has been shown. CVI guidelines should be up-to-date and be available to all employees.</p> <ul style="list-style-type: none"> ▪ Structural measures to maintain a consistent CVI are generally overestimated by organisations whereas the importance of cultural measures is underestimated. ▪ The availability of technical tools such as templates appears not to be related to the perceived consistency of the CVI. ▪ The function of managers as role model for employees appears to be important regarding a consistent CVI.
(Wang and Ahmed, 2004)	<ul style="list-style-type: none"> ▪ First, the paper identifies five key types of innovativeness namely: (1) product innovativeness, (2) market innovativeness, (3) process innovativeness, (4) behavioural innovativeness and (5) strategic innovativeness. Based on these five categories, the paper then develops a measurement scale for an overall organisational innovativeness construct.
(Flavián et al, 2004)	<ul style="list-style-type: none"> ▪ A valid and reliable scale for measuring consumers' overall perceived image of Internet banking has been developed. Based on empirical data, banks' image is considered as a multidimensional construct, made up of reputation, security as perceived by consumers, and the services offered.
(Van den Bosch et al, 2005)	<ul style="list-style-type: none"> ▪ The conceptual paper investigates the role of CVI in relation to reputation. Reputation has been considered according to Fombrun and Van Riel's (2004) five dimension of reputation: visibility, distinctiveness, authenticity, transparency, and consistency. ▪ CVI is considered as a useful tool for managing reputation since it is argued to support each of the five dimensions of reputation, through design quality, range and condition of application.
(Simões et al, 2005)	<ul style="list-style-type: none"> ▪ Provide empirical study in hotel industry, aiming to develop scale to measure corporate identity management (CIM), with a focus on internal and controllable dimension of corporate identity. ▪ Corporate identity management (CIM) comprises three aspects: visual identity, communications and philosophy, mission and values. ▪ Proposed definition of corporate identity management: "(1) the implementation, support, and maintenance of visual systems; (2) the expression and pursuit of brand and image consistency through global organizational symbols and forms of communication; and (3) the

	<p>endorsement of consistent behaviour through the diffusion of a company's mission, values, and goals" (Simões et al, 2005:158).</p>
(Melewar et al, 2006)	<ul style="list-style-type: none"> ▪ Starting with a review of definitions of corporate identity, the paper aims to illustrate the role of corporate identity in relation to communication and visual identity, and its relevance for the organisation. ▪ By focusing on the communication and visual identity sections of the corporate identity model developed by Melewar and Jenkins (2002) the paper highlights the multifaceted nature of corporate identity beyond the company's logo and name. ▪ The paper examines the different ways of internal and external communications and presents several examples, in order to illustrate the benefits of corporate identity for managers.
(Van den Bosch et al, 2006a)	<ul style="list-style-type: none"> ▪ An empirical study investigated the relation between two sets of independent variables (1) 'organizational and management characteristics', and (2) 'CVI management instruments' and the dependant variable 'perceived CVI consistency'. ▪ The study differentiated between manufacturing and service organizations and profit-making and non-profit organizations. ▪ Results show that, regardless of the type of organisation, all three management characteristics seemed to be important. ▪ The perceived consistency of CVI was considerably greater in profit-making organisations than in non-profit organizations. ▪ In addition, CVI management characteristics and most of the CVI management instruments appeared to be more important for profit-making organisations. ▪ Moreover, the existence of knowledge of the strategy, which was higher in profit-making organisations, led to greater CVI consistency.
(Van den Bosch et al, 2006b)	<ul style="list-style-type: none"> ▪ (See also Van den Bosch et al (2006a) for same study). ▪ Based on empirical data, the relation between two sets of independent variables (1) organisational characteristics and (2) CVI management characteristics and the dependant variable 'CVI consistency' was investigated. ▪ Among others, results show that CVI management characteristics (socialisation processes related to CVI, knowledge of CVI strategy, and CVI tools and support) strongly influence CVI consistency. ▪ In particular, CVI knowledge of strategy and CVI socialisation processes show the strongest relation with

	<p>CVI consistency.</p> <ul style="list-style-type: none"> ▪ Except for ‘openness and dynamic’ of an organisation, organisational characteristics appear not to be related directly with CVI consistency. Open and dynamic organisations seem to have a more consistent CVI.
(Brown et al, 2006)	<ul style="list-style-type: none"> ▪ Provide taxonomy for the identity and image domain. ▪ Differentiation between “Individual Level” and “Organisational Level” and between “All Aspects” and “CED Aspects” of an organisation. ▪ Viewpoint 1: “Member organizational associations” / “Organisational Identity” ▪ Viewpoint 2: “Intended associations” / “Intended image” ▪ Viewpoint 3: “Construed associations” / “Construed image” ▪ Viewpoint 4: “Corporate associations” / “Reputation”
(Balmer and Greyser, 2006)	<ul style="list-style-type: none"> ▪ The paper provides a viewpoint on the past decades of marketing literature, and advocates the view that areas such as corporate identity, corporate branding, corporate communications, and corporate reputation should be integrated under the concept of “corporate marketing”. ▪ Subsequently, the paper proposes the 6Cs of corporate marketing: (1) Character (2) Culture (3) Communication (4) Constituents (5) Conceptualisation (6) Covenant. ▪ In addition, the paper compares the four models of power relationships in marketing, the major components of corporate marketing and the 6Cs with the 11 Ps of corporate marketing (Balmer, 1998).
(Karaosmanoglu and Melewar, 2006)	<ul style="list-style-type: none"> ▪ Based on a literature review the paper focuses on the role of controlled elements of the CI mix (symbolism, communication behaviour) and uncontrolled communicators (interpersonal communication, intermediary communication, intrapersonal communication) in relation to corporate image formation, leading to a research agenda including 14 propositions.

Source: The Researcher

Based on the presented literature review of two streams of literature, namely sound (i.e. the auditory dimension) and corporate identity and corporate image, a gap in existing research has been revealed. That is, the auditory dimension has not been considered as a component of the corporate identity mix and therefore has not been investigated in terms of its role in corporate identity management in the corporate identity and corporate image literature so far. Consequently, this research aims to

close this gap by investigating the role of the auditory dimension in relation to corporate identity management.

In the next chapter, a definition of the focal construct of this research is given. Subsequently, a conceptual framework reflecting a set of hypotheses based on the linkage between the auditory dimension and corporate identity management is presented.

3. Conceptual Framework

3.1 Introduction

Academic literature provides a variety of conceptualisations of the corporate identity and corporate image construct (See Chapter 2). Based on different streams of research, various perspectives on the domain have emerged over time. Focusing on a visual perspective, the graphic design paradigm for instance predominantly considers corporate identity in regard to its role in communicating the organisation's philosophy, making it more visible, keeping it up-to-date and supporting consistent communication (Balmer, 1995).

Organisational behaviourists (e.g. Albert and Whetten, 1985; Ashforth and Mael, 1989; Bergami and Bagozzi, 2000; Dutton and Dukerich, 1991; Dutton et al, 1994; Elsbach and Kramer, 1996; Foreman and Whetten, 2002; Gioia et al, 2000; Gioia and Thomas, 1996; Hatch and Schultz, 1997; 2004; Whetten and Godfrey, 1998; Whetten and Mackey, 2002) predominantly perceive the concept of identity from an internal perspective, focusing on the relation between the organisation and its employees, while marketing theorists (e.g. Aaker, 1996; Andreassen and Lindestad, 1998; Balmer, 1995; Bhattacharya and Sen, 2003; De Chernatony, 1999; De Chernatony and Harris, 2000; Keller, 1999; Knox and Bickerton, 2003; Martineau, 1958; McDonald et al, 2001; Melewar, 2001; 2003; Nelson, 1962; Nguyen and LeBlanc, 1998; Spector, 1961; Zinkhan et al, 2001) mainly take an external perspective (Balmer, 1998) and perceive corporate identity as what the organisation projects to various predominantly external stakeholders.

In addition, the integrated communication paradigm focuses on the degree of integration of the corporate communication mix (Van Riel, 1995) and asks whether formal communication activities are designed to convey consistent and congruent messages to all stakeholders (Bick et al, 2003). Finally, the interdisciplinary perspective aims to integrate the various facets related to corporate identity such as

graphic design, organisational studies, and marketing perspectives (Simões et al, 2005).

This research conceptualises corporate auditory identity similar to the visual identity construct as a company-controlled communication cue, reflecting the company to its diverse audiences. Therefore, this research incorporates the graphic design paradigm, which reflects the concept of conveying visual identity. Moreover, this research follows the marketing paradigm and in particular adopts an integrated communication perspective, which is based on the viewpoint that corporate auditory identity in this research is conceptualised as a company-controlled communication factor that can be strategically planned and managed by the company in order to ensure consistent and congruent message dissemination to all stakeholders (Balmer, 2001a; Balmer and Gray, 1999; Bick et al, 2003; Cornelissen, 2000). Consequently, based on the paradigms adopted by this research, the following sections present definitions of key constructs as used in this research.

3.2 Corporate Auditory Identity (Focal Construct)

Since auditory identity is considered in this research similar to visual identity as a constituent of the corporate identity mix, thus being a factor of corporate identity management, corporate identity constitutes one core domain of this research. This research agrees on the definition by Van Rekom (1997:411) and Melewar (2003:197) who define corporate identity as “*the set of meanings by which a company allows itself to be known and through which it allows people to describe, remember and relate to it*”. This definition reflects a projective viewpoint of corporate identity, linking identity to the communication activities by which a company conveys its identity.

Furthermore, this research follows the view of Van Riel (1995) who defines corporate communication as consisting of management communication, organisational communication and marketing communication. In accordance with the above perspective of corporate identity, this research follows the definition by Balmer (2001a:253) who defines corporate communication as “*the channels by*

which a business identity is made known to internal and external stakeholders and networks [...]”. The perspective of this definition of corporate communication is in line with the wider view of this research, namely, that communication activities are not limited to visual messages for instance, but can incorporate additional means of communication such as auditory cues.

Moreover, this research strongly draws on the visual identity literature since it builds on similarities between auditory identity and visual identity (Balmer, 2001a; Fraedrich and King, 1998). Corporate visual identity has been conceptualised as a constituent of the corporate identity mix (1986; 1995) and as a significant factor regarding corporate identity management and corporate image formation (Dowling, 1994; Melewar and Saunders, 1998; Van den Bosch et al, 2006b; Van Riel and Balmer, 1997; Van Riel et al, 2001). Moreover, as Bromley (2001:319) points out, *“an organisation's visual identity is assumed to be a very important aspect of corporate communications”*. This research follows the definition by Melewar (2003:201) and defines corporate visual identity as *“an assembly of visual cues by which an audience can recognize the company and distinguish it from others”*.

Based on the proposed similarities of the two sensory dimensions of visual and auditory identity, and borrowing from the visual identity literature, this research consequently defines corporate auditory identity as *“an assembly of auditory cues by which an audience can recognize the company and distinguish it from others”* (Bartholmé and Melewar, 2011a:95; 2011b:62). Auditory cues are elements such as sound logos, ambient music, advertising sound, soundscapes in spaces, and sound on the telephone (Treasure, 2007), which are based on the notion of sonic touchpoints such as website, CD-ROM, corporate film, TV, radio (Jackson, 2003) (See also Chapter 2, and for a more complete list of auditory cues and sonic touchpoints please see Appendix 1).

Corporate visual identity management has been conceptualised by Simões et al (2005:158) as referring to *“specific dimensions that involve creating and implementing guidelines for the use of symbolism within the company: the company name, logotype/symbol, typography, colour, buildings and vehicles, visual audits and*

formal guidelines, and staff appearance". Drawing on the definitions by Melewar (2003) and Simões et al (2005) this research defines corporate visual identity management as the *"management of visual cues by an organisation that involve creating and implementing guidelines for the use of visual identity elements and applications"*. Analogous to this definition, corporate auditory identity management is defined in this research as *"the management of auditory cues by an organisation that involves creating and implementing guidelines for the use of auditory identity elements and applications"* (Bartholmé and Melewar, 2011a:96).

The key objective of this research is to investigate corporate auditory identity from an organisational perspective. The following two subchapters present the hypotheses of this research, that is, the antecedents and perceived consequences of corporate auditory identity management, which subsequently constitute the conceptual research framework.

3.3 Hypotheses (Antecedents)

3.3.1 Organisational Characteristics

Van den Bosch et al (2006a; 2006b) have examined various organisational characteristics such as knowledge of strategy, tools and support, quality of managers, internal communication, and open and dynamic in relation to their role in determining the consistency of corporate visual identity. In particular, the variable 'open and dynamic' has been operationalised in order to measure the extent to which an *"organization operates in a dynamic environment and therefore has to act flexibly and anticipate changes"* (Van den Bosch et al, 2006a:146). The findings of their research suggest that the variable 'open and dynamic' significantly influences the consistency of corporate visual identity (Van den Bosch et al, 2006a). Van den Bosch et al (2006a; 2006b) argue that organisations adopt the environment in which they operate in order to survive and conclude that organisations acting in a dynamic environment might have to be more flexible and responsive. This, according to Van den Bosch et al (2006b), leads to a stronger awareness of corporate strategy and subsequently positively affects the commitment of employees regarding visual

identity. In addition, the authors are of the view that “...*a dynamic environment places greater demands on consistent presentation than a static environment...*” (Van den Bosch et al, 2006b:865).

In general, this research follows the viewpoint of Van den Bosch et al (2006b) that organisations that are ‘open and dynamic’ are more likely to manage communication cues more actively. However, the construct ‘open and dynamic’ appears to be problematic. That is, the variable apparently consists of the two components ‘open’ and ‘dynamic’ thus indicating that ‘open’ and ‘dynamic’ may not be identical, since otherwise either ‘open’ or ‘dynamic’ would be sufficient to capture this particular dimension. Despite the problem with the variable ‘open and dynamic’, this research agrees with the basic underlying rationale as described by Van den Bosch et al (2006a:146) that an organisation that “*act flexibly*” is more likely to have a stronger awareness of corporate strategy and is more committed to a consistent visual identity.

However, even though this research draws on the work by Van den Bosch et al (2006a; 2006b), it rather considers the organisational characteristic of ‘anticipation of changes and developments’ as a significant factor regarding auditory identity. In detail, Van den Bosch et al (2006a:146) argue that organisations that operate in a dynamic environment have to “*act flexibly and anticipate changes*”. That is, being more ‘flexible and responsive’ and thus ‘anticipating changes’ is conceptualised as a result of ‘operating in a dynamic environment’. In other words, the variable ‘open and dynamic’ has been conceptualised in a causal sense as an antecedent factor of the organisational characteristic of ‘anticipating changes’. This relation also is visible through the fact that Van den Bosch et al (2006a:146; 2006b:874) have included the statement “*Our organization continually anticipates new developments*” as one reflective indicator for measuring the variable ‘open and dynamic’.

This research draws on the proposed relation between the characteristics of ‘acting flexibly’ and thus ‘anticipating changes’ and the degree of visual identity management. However, rather than conceptualising ‘open and dynamic’ as an antecedent of auditory identity, this research conceptualises the proposed

consequence of ‘open and dynamic’ namely ‘anticipating changes and developments’ as a relevant factor of auditory identity.

In detail, this research follows the view that organisations that continually consider and anticipate changes and developments are more likely to manage their identity by incorporating additional and more recent communication cues such as sound. In this research the organisational characteristic of anticipating changes and developments is named ‘forward thinking’, which leads to the following hypothesis:

H 1: Being a forward thinking organisation is positively related to a higher degree of corporate auditory identity management.

Innovativeness not only has been widely considered as a desirable company characteristic that can lead to enhanced organisational performance (Subramanian and Nilakanta, 1996) but also has been linked to corporate image and image formation. For instance, Whetten (1997) argues that technological innovativeness is a central ability of companies, whereby corporate abilities are a key aspect regarding image formation. Moreover, Brown and Dacin (1997) and Brown (1998) have examined the linkage between product and company assessment and conclude that corporate ability associations such as technological innovativeness are linked to the overall evaluation of the company and can influence consumers’ evaluation of new products.

However, existing literature presents a variety of ways in which the innovativeness construct has been conceptualised, and hitherto academics were rather unsuccessful in defining innovativeness in a unitary way (Armbruster et al, 2008). For instance, based on the fundamental differentiation between individual innovativeness and organisational innovativeness, Midgley and Dowling (1978:229) refer to consumer innovativeness (i.e. individual) arguing that innovativeness widely has been conceptualised as a personality trait, whereby personality trait can be defined as “*persisting characteristic or disposition by which one individual can be distinguished from another*”. Moreover, Midgley and Dowling (1978:235) differentiate between ‘innate innovativeness’ which refers to “*the degree to which an*

individual makes innovation decisions independently of the communicated experience of others” and on the other hand ‘actualised innovativeness’ which considers innovative behaviour that explicitly takes into account the influencing role of communication.

What is more important, Ravichandran (1999) asserts that the term innovativeness in many cases has been used rather as a cover term for adoption and that a great number of innovation research in fact deals with innovation adoption. Referring to this topic, Ravichandran (1999:244) points out that there is “*a general lack of conceptual clarity, eventually precluding a definition and a measure for organizational innovation*” and thus, that the two terms ‘innovation’ and ‘adoption’ have been equated and used interchangeably. Ravichandran (1999:258) summarises the dissimilarity of the two concepts by pointing out that “*whilst innovations are creations, adoptions are absorptions*“, and argues that “*the content of innovation includes newness and uncertainty, while adoption includes familiarity and predictability*“. For instance, Rogers (1962:22) in his seminal work about the diffusion of innovations builds on the aspect of adoption by proposing five adopter categories and by defining innovativeness as “*the degree to which an individual or other unit of adoption is relatively earlier in adopting new ideas than any other member of the system*”.¹ The aspect of time in terms of past activities also has been addressed by Florida (2001:210) who refers to organisational innovativeness as a “*firms' previous commitment and track record in implementing advanced organizational practices*”.

However, with the aim of overcoming the lack of clear conceptualisation of innovativeness and adoption, Ravichandran (1999) proposes a definition for each concept. That is, Ravichandran (1999:257) defines organisational innovation as “*the actualization of the creation of a new product, process, method or service by an organization, through concerted and committed efforts of its members, and by other resources, exhibiting a perceptual departure from its antecedent and demonstrating one or more utility values*”. Adoption subsequently is defined as “*an innovation,*

¹ The five adopter categories proposed by Rogers (1962) are innovators, early adopters, early majority, late majority and laggards.

created earlier, elsewhere, which had manifested a noticeable advancement from its precedent, with one or more utility values, bought/borrowed by an organization” (Ravichandran, 1999:258).

With some prevalence of innovativeness in comparison to the concept of innovation adoption, existing literature provides various schools of thought, taxonomies and conceptualisations on organisational innovativeness (Armbruster et al, 2008). To start with, according to Subramanian and Nilakanta (1996), there have been two basic perspectives in existing research regarding the cause and effect of innovativeness. That is, the first perspective considers innovativeness as *“organizational responses to external environmental changes”* (Subramanian and Nilakanta, 1996:632), thus being caused from outside. In contrast, the second perspective advocates the view that companies take strategic actions that can change the environment. In detail, Subramanian and Nilakanta (1996:632) argue that *“the adoption of innovations by an organization is a consequence of strategic initiatives proactively pursued by decision makers in the organization”*. In other words, while one viewpoint defines innovativeness (or innovation adoption) as determined by exogenous factors, the second one predominantly takes an endogenous perspective.

Nevertheless, a key difference of the various provided definitions, conceptualisations and associated measurements of the innovativeness construct (or innovation adoption construct) refers to the dimensions that constitute the overall construct. Various authors (e.g. Brown, 1998; Brown and Dacin, 1997; Damanpour, 1991; Whetten, 1997) agree on a basic categorisation that refers to the ‘dual-core model’ of organisational innovation as proposed by Daft (1978) which differentiates between administrative and technical innovativeness. While technical innovations refer to products, services, and production process technology, administrative innovativeness is linked to work activities and management, involving organisational structure and administrative processes (Damanpour, 1991).

By building on the dual-core model, Damanpour (1991) proposes a categorisation based on three pairs of types of innovation, namely, administrative and technical, product and process, and radical and incremental (Dewar and Dutton, 1986). In

detail, Damanpour (1991:556) defines innovation as “*adoption of an internally generated or purchased device, system, policy, program, process, product, or service that is new to the adopting organization*”.

Also drawing on the dual-core model, Armbruster et al (2008) not only differentiate between technical and non-technical innovations (i.e. administrative), but in addition distinguish between product and service, leading to the following four types of organisational innovations: (1) technical product innovations, (2) non-technical service innovations, (3) technical process innovations, and (4) non-technical process innovations. Overall, they define organisational innovation as “*the use of new managerial and working concepts and practices*” (Armbruster et al, 2008:646).

Moreover, Ravichandran (1999:256) refers to a definition by Thompson (1965) that conceptualises innovation as “*the generation, acceptance and implementation of new ideas, processes, products and services*”. This definition not only illustrates the multifaceted character of the construct by acknowledging the aspects of creation and utilisation but also pointing to the already mentioned distinction between the concept of innovation and innovation adoption.

Overall, Ravichandran (1999) summarises existing typology of innovation in the literature as mainly referring to a dyadic classification similar to Daft (1978) of technical innovativeness (new technologies, products and services) and administrative innovativeness (new procedures, policies and organizational forms). Also referring to the ‘dual-core model’ of organisational innovation by Daft (1978), Avlonitis et al (1994:9) argue that innovativeness not only is related to technical aspects but is also related to the activities in the “*behavioural sphere of firms*”. Accordingly, Avlonitis et al (1994:9) define organisational innovativeness as a “*latent capability of firms*” regarding technological and a behavioural innovations, and argue that innovativeness basically reflects “*the capacity and the commitment of the firm to innovate*”. In detail, Avlonitis et al (1994:12) argue that the behavioural dimension of innovativeness should reflect “*the sustained behavioural change of the organization towards innovations - behavioural commitment, in other words*”.

Wang and Ahmed (2004) support the position of Avlonitis et al (1994) with regard to the behavioural dimension by arguing that innovativeness implies change in behaviour. That is, Wang and Ahmed (2004) conceptualise organisational innovativeness as consisting of five dimensions, namely, (1) product innovativeness, (2) market innovativeness, (3) process innovativeness, (4) behavioural innovativeness, (5) strategic innovativeness. Accordingly, Wang and Ahmed (2004:304) emphasise the role of innovativeness with regard to markets and define organisational innovativeness as “*an organisation’s overall innovative capability of introducing new products to the market, or opening up new markets, through combining strategic orientation with innovative behaviour and process*”.

Moreover, with regard to the behavioural dimension of innovation, Wang and Ahmed (2004) propose three levels, namely, individual, team and management level. While the individual level of innovativeness can be linked to a personal trait, team level refers to the “*team’s adaptability to change*” (Wang and Ahmed, 2004:305). Thirdly, managerial innovativeness is conceptualised as “*management’s willingness to change, and commitment to encourage new ways of doing things, as well as the willingness to foster new ideas*” (Wang and Ahmed, 2004:305). Finally, similar to authors such as Rogers (1962), Thompson (1965) and Wang and Ahmed (2004), Kirca et al (2005:25) include ‘idea’ as one facet of innovation, defining organisational innovativeness as a company’s “*ability to create and implement new ideas, products, and processes*”.

Based on the presented discussion and with regard to corporate auditory identity as the focal construct, this research considers the organisational characteristic of innovation adoption rather than innovativeness as linked to creation (Ravichandran, 1999), thus implying a rather exogenous viewpoint (Subramanian and Nilakanta, 1996). Moreover, referring to the dual-core model (Daft, 1978) this research considers innovation adoption from an administrative rather than a technical perspective. In detail, with regard to the various dimensions that have been conceptualised to comprise innovativeness and innovation adoption, respectively, as presented in the section above, this research builds on the behavioural dimension of

innovation adoption, i.e. the behavioural commitment of an organisation to innovation adoption (Avlonitis et al, 1994).

In particular, the managerial level of the behavioural dimension of innovativeness as proposed by Wang and Ahmed (2004) is adopted in this research. In other words, this research focuses on the behaviour of an organisation's management with regard to the implementation of new ideas and behaviours (Damanpour, 1991; Kirca et al, 2005; Rogers, 1962; Thompson, 1965; Wang and Ahmed, 2004). Consequently, for the purpose of this study organisational innovation adoption is conceptualised as "*the behavioural commitment of an organisation's management to adopt and implement new ideas, behaviours, and managerial and working concepts and practices*" (based on Armbruster et al, 2008; Avlonitis et al, 1994; Damanpour, 1991; Kirca et al, 2005; Wang and Ahmed, 2004).

Drawing on the above definition, this research proposes that organisational innovation adoption, as conceptualised in the last section as the behavioural managerial dimension, is positively related to the management of corporate auditory identity as an additional element of company-controlled communication activities, thus leading to the following hypothesis:

H 2: Organisational innovation adoption is positively related to a higher degree of corporate auditory identity management.

3.3.2 Market Conditions, Corporate and Communication Strategy

Corporate strategy, which has been defined in identity literature as an underlying determinant of the business of organisations (Melewar and Jenkins, 2002) has been closely linked to corporate identity. Gray and Balmer (1998) argue that, alongside philosophy, culture and organisational design, strategy is one key component of corporate identity. This view has been reflected by various corporate identity models. Melewar and Jenkins (2002) for instance incorporate corporate and marketing strategy as part of market conditions, which is considered as a sub-construct of corporate identity. Subsequently, corporate identity models proposed by Melewar

(2003), Melewar et al (2005b) and Melewar and Karaosmanoglu (2006) include corporate strategy as a key component of the corporate identity construct. Melewar and Karaosmanoglu (2006:862) argue that “*strategy can be considered as a subset of corporate identity in this situation because it provides the means by which identity is perpetuated throughout the company*“. This view also is supported by qualitative data, gathered through in-depth interviews with managers in a study by Melewar and Karaosmanoglu (2006). Consequently, Melewar and Karaosmanoglu (2006:861) argue that corporate strategy not only can influence corporate image but that it is “*the blueprint of the firm’s fundamental objectives and strategies for competing in their given market*”.

Different categorisations of corporate strategy have been developed over the last decades (Subramanian and Nilakanta, 1996). Some authors such as Bharadwaj et al (1993) for instance, predominantly refer to cost leadership and differentiation strategy as two ways of gaining competitive positional advantages. However, many of the different types of strategy are based on the prominent conceptualisations of corporate strategy developed by Porter (1980) who categorises three generic types of strategy, namely cost leadership, differentiation, and focus strategy.

The underlying principle of a differentiation strategy for an organisation according to existing marketing and strategy literature is to provide unique features that offer superior value for customers in order to differentiate from its competitors (Porter, 1980). According to Porter (1985:119) “*a firm differentiates itself from its competitors if it can be unique at something that is valuable to buyers*”. Kotler (2002:287) defines differentiation as “*the act of designing a set of meaningful differences to distinguish the company’s offering from competitors’ offerings*”. In addition, according to Kotler (2002), differentiation can be achieved by providing superior quality in the following categories: product, service, personnel, distribution and image.

Referring to the various ways of differentiation, Wilkinson and Balmer (1996) argue that due to increasingly similar products and imitable price structures, product differentiation is difficult to sustain, thus, achieving differentiation based on a

distinct corporate identity becomes crucial. Lovelock (1984) supports this view, by arguing that if performance, price, and availability of services are perceived as being very similar, differentiation based on images becomes increasingly crucial for customers' choice decisions. Moreover, Balmer and Stotvig (1997) and Flavián et al (2004) stress the importance of a strong corporate image as a means for differentiation. In addition, Balmer (1995) argues that a strong corporate image can become a crucial factor of differentiation particular in a competitive environment.

Consequently, there is broad consensus in the view that corporate identity and corporate image are a potential source of differentiation (Gray and Smeltzer, 1987; Olins, 1989; Simões et al, 2005; Van Riel and Balmer, 1997) and many writers have supported the view that differentiation strategy is linked to corporate identity, since factors for differentiation can be part of an organisation's identity (Melewar and Karaosmanoglu, 2006). Balmer (1995; 1998) supports this linkage, arguing that the need for differentiation particular for service companies is a key reason that has led to an increasing interest in corporate identity.

Accordingly, differentiation strategy has been of considerable interest in the corporate identity and corporate image literature (e.g. Abratt, 1989; Balmer, 1995; 1998; Balmer and Stotvig, 1997; Dowling, 1993; Flavián et al, 2004; Gray and Balmer, 1998; Gray and Smeltzer, 1987; Hatch and Schultz, 2003; Melewar, 2003; Melewar and Karaosmanoglu, 2006; Van Riel and Balmer, 1997). Melewar and Karaosmanoglu (2006) define differentiation strategy as part of the overall corporate strategy, concerned with the particular strengths of an organisation that enable it to compete in the market place. Dowling (1993:103), referring to Porter (1985), argues that differentiation can be achieved if "*the company offers superior product quality and/or attempts to be unique in some important customer benefit area...*". In addition, Olins (1995:3) defines corporate identity as "*the explicit management of all the ways in which the organization presents itself to all of its audiences*" and argues that there are four aspects that can project identity, namely: "*who you are, what you do, how you do it and where you want to go*". Moreover, Whetten and Mackey (2002) refer to these four very aspects and conclude that they indicate how corporate identity can offer differentiation for an organisation.

Furthermore, the Strathclyde statement (cf. Balmer, 2001a) explicitly incorporates the linkage between corporate identity and differentiating strategy, stating that one key objective of managing corporate identity is that it “*can help to differentiate the organisation within its competitive environment*” (Balmer, 2001a:264). In addition, many authors (e.g. Abratt, 1989; Gray and Smeltzer, 1987; Van Heerden and Puth, 1995; Van Riel and Balmer, 1997) support the view that corporate identity is not only linked to differentiation but that it is also the basis for positioning (Melewar et al, 2005b). In particular, work by Ries and Trout (1981) has coined the perspective of “*using image as a market positioning device*” (Dowling, 1993:101).

Additionally, the significance of positioning has been reflected by Balmer (1998) and Balmer and Greyser (2006) by including positioning as one P of an extended marketing mix and by relating it to the strategic school and the strategic visual school, as two of Balmer’s (1995) seven schools of thought. Cornelissen and Elving (2003) directly link the concept of positioning to the three types of corporate identity, namely monolithic, endorsed or branded as proposed by Olins (1989; 1995). However, Van Heerden and Puth (1995:12) stress the importance of both concepts, differentiation and positioning and refer to various benefits such as “*maintaining or expanding market share, keeping customers and business relations loyal, pre-empting competitive moves, and maintaining a profitable position*”.

The multifaceted qualities of corporate identity with regard to differentiation and positioning have also been stressed by Downey (1986) and Melewar (2003:197) who argue that corporate identity is “*the focus for a corporation’s identification. It involves a company’s verbal and visual presentation, marketplace positioning and competitive differentiation at the corporate, business unit and product levels*”. Consequently, the corporate identity model proposed by Melewar (2003) incorporates differentiation strategy and positioning strategy as two components of the corporate strategy construct, which is reflected in the model as a component of corporate identity. Melewar (2003:220) also refers to the two dimensions of corporate strategy, when defining positioning strategy as “*the process in which the company is assigned a clearly defined position, derived from its self-perception, in*

order to differentiate it from the competition". Nandan (2005) supports the view that positioning reflects the idea of emphasising unique attributes and characteristics, that is, to stress what is different in comparison to main competitors. Likewise, Brown et al (2006) are of the view that positioning is one of the most important strategic decisions for managers and that it essentially deals with selecting the attributes and characteristics of an organisation that stakeholders should perceive as the most strongest.

Hatch and Schultz (2003:1041) also advocate the link between differentiation and positioning in regard to corporate identity by pointing out that "*differentiation requires positioning, not products, but the whole corporation*". Hatch and Schultz (2003) argue that based on an increasingly unstable market environment, the whole organisation with its values and emotions becomes the centre of a differentiation strategy, with positioning being the objective (Pina et al, 2006). Moreover, Melewar (2003) and Melewar and Karaosmanoglu (2006) argue that following a positioning strategy can be associated with aiming for a desired corporate identity. Consequently, organisations position themselves in order to achieve a differentiation from competitors (Melewar and Karaosmanoglu, 2006). Similarly, Balmer's (2001b:18) AC²ID Test™, which differentiates between actual, communicated, conceived, ideal and desired identity, links positioning to the ideal identity and refers to it as the articulation of "*the optimum positioning of the organization in its market, or markets, in a given time-frame*".

In addition, as part of corporate identity management, corporate communication and corporate visual identity both have been argued to play an important role. Fombrun and Shanley (1990) argue that marketing and corporate communication activities such as advertising support differentiation by developing strategic positions that can distinguish a company from its competitors. Similarly, Andreassen and Lindestad (1998) argue that many service companies, aiming for relative attractiveness based on a strong corporate image, follow a positioning strategy based on the communication channel.

Furthermore, Markwick and Fill (1997) stress that one way of achieving differentiation is by using visual cues (i.e. visual identity) and Melewar et al (2005a:386) point out that “...*one of the logo’s strengths is differentiation*”. Van den Bosch et al (2005) also stress the option of changing corporate visual identity in order to communicate a change in the positioning strategy. In addition, Ries and Trout (1981) and Schmitt and Pan (1994) argue that company names, which has been conceptualised as one element of corporate visual identity (Melewar, 2003), can play a supporting role in positioning the company and its products in stakeholders’ minds.

Drawing on the presented perspectives, this research is of the view that companies, particularly when they operate in highly competitive market environments, utilise corporate auditory identity management as a means to generate differentiation and to achieve a desired positioning within the market. That is, companies take on board additional ways of communicating their identity when following a differentiation strategy based on corporate image rather than on other factors (e.g. product, service, personnel, and distribution). This leads to the following hypotheses:

H 3: Companies that operate in a highly competitive market are more likely to have a higher degree of corporate auditory identity management.

H 4: Companies that follow a differentiation strategy based on image are more likely to have a higher degree of corporate auditory identity management.

The importance of marketing and corporate communication as well as visual identity in relation to positioning and differentiation strategy has been stressed by various authors (e.g. Andreassen and Lindestad, 1998; Fombrun and Shanley, 1990; Markwick and Fill, 1997; Melewar et al, 2005a). That is, differentiation strategies based on corporate image put special emphasis on the management of communication activities. The integrated communication paradigm (See Chapter 2), which emphasises the strategic integration of the corporate communication mix in conveying consistent and congruent messages through all channels reflects this perspective (cf. Balmer, 2001a; Bick et al, 2003; Duncan and Everett, 1993; Gray

and Smeltzer, 1987; Kitchen and Schultz, 1998; Kitchen et al, 2004; Low, 2000; Nowak and Phelps, 1994; Phelps and Johnson, 1996; Van Riel, 1995).

This research strongly builds on the integrated communication paradigm and follows Van Riel's (1995) definition of corporate communication mix as consisting of management, organisational and marketing communication. In addition, rather than conceptualising 'integrated communication' as the coordination of marketing campaigns or the incorporated use of various elements of different communication materials (cf. Beard, 1997; Phelps et al, 1996), this research follows the notion of integrated communication as related to the concept of 'one voice' (cf. Beard, 1997; Phelps et al, 1996). In detail, building on the one voice concept (Beard, 1997; Phelps et al, 1996) and based on the definition by Christensen et al (2008), this research defines the variable 'integrated communication' as "*the strategic integration of the corporate communication mix in conveying consistent and congruent messages through all communications disciplines*".

Given that this research conceptualises corporate auditory identity as a company-controlled communication factor, and drawing on the integrated communication paradigm, this research considers the strategic decision of a company to emphasise an integrated communication approach (i.e. following an integrated communication strategy) as a determining factor of corporate auditory identity management. This leads to the following hypothesis:

H 5: Companies that emphasise integrated communication are more likely to have a higher degree of corporate auditory identity management.

3.3.3 Corporate Visual Identity Management

Corporate visual identity has been commonly conceptualised as one constituent of corporate identity in academic literature (e.g. Balmer, 1995; Melewar, 2003; Melewar and Jenkins, 2002; Melewar and Karaosmanoglu, 2006; Suvatjis and De Chernatony, 2005). Moreover, practitioners and academics have argued that visual cues play a crucial role regarding corporate and marketing communication (e.g.

Balmer, 1995; Carter, 1982; Hatch and Schultz, 1997; Henrion and Parkin, 1967; Margulies, 1977; Pilditch, 1970; Van Riel, 1995; Van Riel and Balmer, 1997). Van den Bosch et al (2004) point out that the research domain of corporate visual identity can be categorised into a design, strategic and operational level.

Various studies regarding the design category have been conducted over the last decades (cf. Colman et al, 1995; Foo, 2003; Gabrielsen et al, 2000; Green and Loveluck, 1994; Haase and Theios, 1996; Henderson and Cote, 1998; Van Riel et al, 2001). Henderson and Cote (1998) for instance have investigated formal design aspects of corporate logos in relation to factors such as correct recognition, false recognition, affect, familiar meaning, with the aim to provide recommendations for manager to select or modify corporate logos. Van Riel et al (2001) have investigated the various properties of a new corporate logo, before and after introduction, as well as in comparison with logos of competitors. In detail, Van Riel et al (2001) have examined, *inter alia*, the intrinsic graphical properties (i.e. factual interpretation), the referential properties (i.e. what the logo represents) as well as the extrinsic properties (i.e. associations with the company) of corporate logos.

Besides the design aspects, various researchers also have examined the strategic dimension of corporate visual identity (e.g. Melewar and Saunders, 1998; 1999; 2000; Melewar et al, 2000; Olins, 1989; Schmitt, 1995). The identity taxonomy proposed by Olins (1989) for instance refers to the strategic decision of a company to either follow a monolithic, endorsed or branded identity strategy. Moreover, Van den Bosch et al (2005) have examined the strategic dimension of visual identity by examining the supporting role of corporate visual identity in relation to reputation based on the framework by Fombrun and Van Riel (2004) which consists of five dimensions, namely visibility, distinctiveness, transparency, authenticity and consistency. Van den Bosch et al (2005:108) conclude that corporate visual identity can “*support each of these dimensions, through the quality of the design, the range of its application, and the condition of carriers*”. Moreover, research by Melewar and Saunders (1998; 1999; 2000) and Melewar et al (2000) has examined strategic facets of corporate visual identity. That is, the authors have investigated determining factors and perceived outcomes of corporate visual identity standardisation of multinational

enterprises (Melewar and Saunders, 1998; 1999; 2000; Melewar et al, 2001). Similarly, Schmitt (1995) has discussed the strategic need for adaptation of visual identity for US and European companies when entering the Asian market.

The third category, as proposed by Van den Bosch et al (2004), deals with the operational level of visual identity. This level includes the development, change and modification of visual identity and deals with one of the most essential aspect of visual identity management, namely, managing visual identity systems in order to achieve and to maintain visual consistency (Van den Bosch et al, 2004). Van den Bosch et al (2004; 2006a; 2006b) have conducted research on this operational level, examining factors such as organisational characteristics and organisational measures, which determine corporate visual identity consistency as perceived by organisations. Some of the most salient outcomes are that having visual identity guidelines that are up-to-date and to which employees have access, as well as the role of senior management, are considered to be important factors regarding the consistency of visual identity (Van den Bosch et al, 2004; 2006a).

Furthermore, in a study conducted by Simões et al (2005) measurement scales were developed in order to operationalise the corporate identity management construct. Three factors, namely, 'mission and values dissemination', 'consistent image implementation' and 'visual identity implementation' have been defined according to an operational perspective of the construct (Simões et al, 2005). Besides a clear overlap of the two factors 'consistent image implementation' and 'visual identity implementation' (Simões et al, 2005), the study and the developed measurement scales in general strongly draw on and emphasise the importance of consistency regarding corporate identity management.

Overall, corporate identity and visual identity have been investigated on an operational management level, which has been linked to the aim of generating consistent and congruent messages (Simões et al, 2005; Van den Bosch et al, 2004; 2006a). The need for consistent marketing and corporate communication, which is emphasised by the integrated communication paradigm (Balmer, 2001a; Bick et al, 2003), constitutes an underlying rationale of this research. Therefore, drawing on the

presented literature and in consideration of the integrated communication paradigm, this research proposes that companies that give emphasis to visual identity management leading to a consistent visual identity system are more likely to draw attention to their auditory communication activities (i.e. corporate auditory identity). This leads to the following hypothesis:

H 6: Corporate visual identity management is positively related to a higher degree of corporate auditory identity management.

3.3.4 Role of Chief Executive Officer

The role of senior managers and chief executive officers has been examined in relation to various aspects in existing marketing literature. Kohli and Jaworski (1990) have suggested that senior managers are one of the most important factors regarding the development of market orientation. In identity literature, senior managers also are considered to play a crucial role when it comes to managing corporate identity, which is strongly reflected by the fact that many of the corporate identity models are vision driven (Melewar, 2003).

Hatch and Schultz (1997) argue that the concept of corporate identity is strongly driven by senior management, based on the view that senior managers “*express the organisation's central idea to external audiences through products; communications behaviour and the environment*” (Balmer, 1998:977). Melewar (2003) confirms this view, arguing that in identity literature a basic perspective is that corporate identity typically is driven by senior management. That is, senior managers articulate what is central to the organisation.

The notion of corporate identity being vision driven has been linked to the strategic quality of corporate identity. As Bick et al (2003) point out, academics as well as practitioners consider corporate identity management as being at the centre of corporate strategy, and therefore senior management are in charge of this subject. Similarly, Melewar (2003) argues that there is general agreement in identity

literature, that senior management plays an important role in communicating the vision and strategy of an organisation.

Based on this perspective, identity literature widely suggests that corporate identity management is placed within the responsibility of senior managers (Baker and Balmer, 1997). Moreover, Balmer and Greyser (2002) stress that, due to increasing competitiveness it is the senior managers that are responsible to review and to protect the corporate identity. Gray and Balmer (1998:701) recapitulate this view as follows: *“It is senior management's responsibility to manage the company's identity and communication system so as to develop and maintain a recognizable image and a favourable reputation”*. In addition, Simões et al (2005), referring to Scott and Lane (2000), provide several rationale for the special role of senior managers when pointing out that despite the fact that all members of an organisation shape and communicate the identity of the organisation, it is managers who, because of their public visibility, formal position and access to resources, are most responsible and capable to manage identity.

Furthermore, Balmer and Gray (1999; 2000) assert that due to a variety of environmental forces such as acceleration of product cycles, deregulation, and increased competition, the need for senior managers to strategically manage corporate identity and communication has increased. Balmer and Greyser (2002) support this view by arguing that due to an increasing number of corporate acquisitions and mergers, senior managers more strongly draw their attention to corporate identity and its communication.

Moreover, regarding the management of corporate identity, Balmer (2001b) asserts that a major task for senior managers as part of corporate identity management is to avoid a lack of alignment of the five types of identity, as proposed by Balmer's AC²ID Test™ (Balmer, 2001b), in order to achieve a maximum of congruency. This is in line with Van Riel and Balmer (1997) and other authors (e.g. Abratt, 1989; Albert and Whetten, 1985; Van Riel, 1995) who agree that senior managers can achieve higher congruency between the actual and desired corporate identity by aligning the corporate identity mix.

Furthermore, regarding managing corporate identity programmes aiming for alignment, Balmer and Wilson (1998) and Melewar and Akel (2005) assert that senior managers consider visual identity as one factor of corporate identity management, which they can completely manipulate and control (in comparison to other elements of the identity mix), in order to achieve visual consistency. As a result, based on the opportunity of total managerial control, graphic design has gained particular attention in the past (Balmer and Wilson, 1998). In addition, Van den Bosch et al (2004) provide empirical evidence, showing that the behaviour of managers, i.e. managers setting an example, is one of the most critical factors that determines the maintenance of consistent corporate visual identity.

However, some researchers not only examined the role of senior managers but in particular emphasise the role of chief executive officers in relation to corporate identity management and corporate branding (Bernstein, 1989). For instance, Dowling (1993) not only considers image formation (i.e. identity management) to be placed on a senior management level but also argues that there is a need for direct feedback to the CEO. Similarly, Balmer and Stotvig (1997) call for the special interest of chief executive officers regarding identity management. In addition, Margulies (1977:67) argues that “*a successful corporate identity program certainly requires the involvement and support of the company's chief executive officer*”. Moreover, Baker and Balmer (1997) emphasise that defining and communicating corporate identity lies within the responsibility of chief executive officer.

In a similar way, Melewar and Saunders (1998:295) acknowledge the key role of the chief executive officer in relation to corporate identity, referring to the CEO as the “*final arbiter and the ultimate owner of the identity*”. Moreover, Olins (1990:38) emphasises that without the commitment of the CEO a corporate identity programme “*will not get off the ground and cannot be sustained*”. A study by Lippincott and Margulies (1988) revealed that for a majority of companies it is the chief executive officer who plays a key role regarding the implementation of corporate identity programmes. Melewar and Saunders (1998), referring to the study by Lippincott and Margulies (1988), propose that a specially appointed corporate identity manager

should be responsible to supervise the programme, while in addition the CEO should be involved and support the programme.

Moreover, drawing on the distinction between the role of senior managers and chief executive officers regarding identity management, Melewar and Saunders (1998) conducted a study which, based on empirical data, show that the degree of involvement of the CEO as well as the CEO being the key internal driving force affects the degree of standardisation more strongly than in comparison to senior managers. In detail Melewar and Saunders (1998:294) point out that *“it is the prime responsibility of the chief executive officer to define and communicate the company’s identity. Devising a well-managed corporate identity programme requires the involvement and support of the company’s chief executive officer”*.

To sum up, corporate identity literature clearly indicates the contribution and participation (cf. Wills Jr. and Ryans Jr., 1977) of senior managers and chief executive officers regarding corporate identity management. Predominantly linked to two key aspects of ‘involvement’ and ‘being the key internal driving force’, existing research emphasise the special role the chief executive officer (Lippincott and Margulies, 1988; Margulies, 1977; Melewar and Saunders, 1998). Drawing on the presented discussion, this research focuses on the aspect of ‘being an internal driving force’ as the key aspect in relation to auditory identity management, thus leading to the following hypothesis.

H 7: The role of the chief executive officer as internal driving force regarding auditory identity is positively related to a higher degree of corporate auditory identity management.

The following table (Table 3.1) recapitulates the underlying rationale derived from literature for the presented hypotheses (antecedents), the construct definitions that are used in this research as well as the supporting literature.

Table 3.1 – Rationale and Supporting Literature for Antecedent Factors

Underlying Rationale	Supporting Literature
1. Forward Thinking	
<p>The degree to which an organisation is ‘forward thinking’ and thus acts flexibly and anticipates changes does affect the degree of corporate auditory identity management. In detail this research defines the variable ‘Forward Thinking’, as <i>“the extent to which an organisation considers and anticipates future changes and developments”</i>.</p>	<p>Van den Bosch et al (2006a; 2006b)</p>
2. Organisational Innovation Adoption	
<p>Organisational innovativeness has been linked to the ability of a company to apply new management disciplines. In detail this research defines the variable ‘Organisational Innovation Adoption’ as <i>“the behavioural commitment of an organisation’s management to adopt and implement new ideas, behaviours, and managerial and working concepts and practices”</i>.</p>	<p>Armbruster et al (2008), (2008), Avlonitis et al (1994), Damanpour (1991), Kirca et al (2005) and Wang and Ahmed (2004)</p>
3. Market Competitiveness	
<p>Corporate strategy is conceptualised as a constituent of corporate identity. Moreover, corporate identity management, which includes auditory identity management as conceptualised in this research, has been argued to be a crucial factor in competitive markets. In detail, this research defines the variable ‘Market Competitiveness’ as <i>“the degree to which a company operates in a highly competitive market”</i>.</p>	<p>Gray and Balmer (1998), Jaworski and Kohli (1993), Melewar (2003), Melewar et al (2005b), Melewar and Jenkins (2002), Melewar and Karaosmanoglu (2006)</p>
4. Differentiation Strategy	
<p>Differentiation strategy is linked to corporate identity, since factors for differentiation can be part of an organisation’s identity. For the purpose of this research the variable ‘Differentiation Strategy’ is defined as <i>“the degree to which a company follows a differentiation strategy based on image”</i>.</p>	<p>Balmer (1995; 1998), Gray and Smeltzer(1987), Kotler (2002), Lovelock (1984), Melewar and Karaosmanoglu (2006), Olins (1989), Porter (1980), Simões et al (2005), Van Riel and Balmer(1997), Whetten and Mackey (2002)</p>
5. Integrated Communication	
<p>Visual identity has been linked to positioning and differentiation of an organisation as part of corporate strategy. This research follows the notion of</p>	<p>Beard (1997), Christensen et al (2008), Markwick and Fill (1997), Melewar</p>

<p>‘integrated communication’ as related to the concept of ‘one voice’ (cf. Beard, 1997; Phelps et al, 1996). Based on the definition by Christensen et al (2008), this research defines the variable ‘Integrated Communication’ as “<i>the strategic integration of the corporate communication mix in conveying consistent and congruent messages through all communications disciplines</i>”.</p>	<p>(2003), Melewar et al (2005a), Phelps et al (1996), Ries and Trout (1981), Schmitt and Pan (1994), Van den Bosch et al (2005)</p>
<p>6. Corporate Visual Identity Management</p>	
<p>Corporate visual identity management has been linked to the aim of generating consistent and congruent messages, which is emphasised by the integrated communication paradigm. This research defines the construct of ‘Corporate Visual Identity’ in line with Melewar (2003:201) as “<i>an assembly of visual cues by which an audience can recognize the company and distinguish it from others</i>”. Following, drawing on the work by Melewar (2003) and Simões et al (2005), this research defines the variable ‘Corporate Visual Identity Management’ as “<i>the management of visual cues by an organisation that involve creating and implementing guidelines for the use of visual identity elements and applications</i>”.</p>	<p>Balmer (2001a), Bernstein (1984), Bick et al (2003), Dowling (1986), Gray and Smeltzer (1985; 1987), Melewar (2003), Simões et al (2005), Van den Bosch (2004; 2006a; 2006b), Van Riel (1995)</p>
<p>7. CEO as Driving Force</p>	
<p>Chief executive officers play a crucial role regarding the definition and communication of corporate identity. For the purpose of this research the variable ‘Chief Executive Officer as Driving Force’ is defined as “<i>the degree to which the CEO is driving the topic of corporate auditory identity in the company.</i>”</p>	<p>Baker and Balmer (1997), Lippincott and Margulies (1988), Margulies (1977), Melewar and Saunders (1998), Olins (1990), Wills and Ryans (1977)</p>

Source: The Researcher

After presenting hypotheses that reflect the linkage between antecedents and the focal construct, the next section lays out hypotheses drawing on the relationship between the focal construct and perceived consequences of corporate auditory identity management.

3.4 Hypotheses (Consequences)

Corporate visual identity, which has been widely conceptualised as one key element of the corporate identity mix, has been in the spotlight of many researchers (e.g.

Baker and Balmer, 1997; Melewar, 2001; Melewar et al, 2006; Van den Bosch et al, 2004; 2005; 2006a; Van den Bosch et al, 2006b). The management of visual identity and corporate identity has been claimed to generate a variety of positive outcomes for an organisation. These outcomes are related to economic, strategic and communication aspects, thereby addressing internal (i.e. employees) as well as external audiences (i.e. consumers). Gray and Balmer (1998) for instance argue that one of the underlying functions of visual identity is to symbolise the culture of an organisation, that is, to reflect the values and specific attitude of an organisation (Karaosmanoglu and Melewar, 2006). The fundamental purpose and significance of visual identity in conveying culture, values, philosophy and characteristics of an organisation is widely acknowledged by academics (e.g. Baker and Balmer, 1997; Balmer, 1998; Schmitt et al, 1995).

Bernstein (1984:162) links the visual dimension to the fundamental concept of corporate personality, arguing that “*the symbol becomes shorthand for the personality of the company*”. Similarly, Balmer (1995) argues that corporate visual identity can be used to transmit the organisation’s distinct culture, which is reflected by the visual behavioural school, as well as an organisation's mission and philosophy, which is conceptualised by the strategic communication school (two of Balmer’s (1995) seven schools of thought of corporate identity management). In addition, Melewar (2001) points out that visual identity can express a corporate mission over many years. Overall, corporate visual identity has been considered to have a strong influence on how a company’s culture, vision and philosophy is reflected to internal and external audiences (Karaosmanoglu and Melewar, 2006).

With regard to internal audiences (i.e. employees) Baker and Balmer (1997:370), referring to Olins (1989), have stressed the benefits of visual identity management by arguing that “... *a symbol, when used as part of organizational change, can serve as a focus for members of the organization...*”. Similarly, Dowling (1994:132) acknowledges the qualities of visual elements as a way to strengthen and generate identity by arguing that logos are “*a badge of identification and membership*”. In a similar way, corporate visual identity management is considered to offer consequences to external stakeholders. That is, visual elements influence consumers’

perception about the company and customers' attitude towards the company. Van Riel et al (2001) argue that the selection of a logo which is easily remembered and being liked by consumers is crucial as it aims to generate a sense of familiarity. Linked to the visual qualities of a logo, Melewar et al (2006) in addition argue that recognition and trust assigned to a logo will have an effect on consumer's buying behaviour and purchase decision.

Furthermore, Melewar and Saunders (1998) investigate the benefits of standardisation of corporate visual identity as perceived by companies. In detail, the authors investigate the link between managing visual identity standardisation and economic outcomes such as increasing sales, gain of market share, increasing value of shares, and improving investment rating. Findings however only suggest a direct relationship between standardised visual identity and two economic outcomes namely, increasing sales and gain of market share.

However, other consequences appear to be more directly attached to visual identity management such as its role regarding corporate communication and marketing communication aspects. One of the general functions of visual identity is to increase the visibility of an organisation (Balmer and Gray, 2000; Van Riel, 1995). Moreover, Van Riel (1995:39) argues that high quality of visual elements increase efficiency of communication activities: "*A good symbol reduces the redundancy in communication to a minimum*". This view is supported by Balmer (1995; 1998) and Baker and Balmer (1997) who argue that visual elements and applications, if they provide a true reflection of the identity of an organisation, can support effective corporate communication efforts (Melewar and Karaosmanoglu, 2006).

Moreover, visual identity provides signals to internal and external audiences that can convey particular attributes of an organisation. Baker and Balmer (1997:369) are of the view that visual identity can convey the particular excellence of a company or product, arguing that: "*logos and symbols [...] act as a mark of quality*". Moreover, they argue that other organisational attributes such as size, strength and reputation also can be conveyed through the management of consistent visual identity. Melewar and Saunders (1999) support this view by asserting that corporate visual identity, as

part of the identity mix, can be used to disseminate particular attributes about an organisation such as quality, prestige and style. The aim of disseminating particular attributes about the company to a variety of audiences also can be linked to Balmer's (1998) design-as-fashion-school, which reflects the aim of keeping the corporate identity fashionable in the eyes of the various audiences (Baker and Balmer, 1997).

The amalgam of particular attributes about a company has been conceptualised by many authors as corporate image (e.g. Barich and Kotler, 1991; Bernstein, 1984; 1997; 1961). Consequently, corporate visual identity has been argued to influence the formation of corporate image. Karaosmanoglu and Melewar (2006) are of the view that consumers' attitude towards visual elements have an effect on identity evaluation (i.e. corporate image). In addition, Balmer (1998:966) stresses the direct relationship between visual identity and corporate image: "*Graphic design has exerted a powerful influence on corporate image with corporate image being interpreted as how an organisation communicates an image through a name and/or icon*". Managing visual identity with the aim of shaping the image of the company is also pointed out by Melewar et al (2006:144) who argue that managers can utilise visual identity to "*gain a higher market profile...*".

In addition to the presented consequences so far, visual identity has also been related to aspects that incorporate the strategic dimension. That is, visual identity management can be used by managers to communicate aspects like strategic changes in business, including mergers and acquisitions (Melewar et al, 2006; Melewar and Harrold, 1999). Baker and Balmer (1997) and Melewar and Akel (2005) refer to Kapferer (1992:52) who argues that "*a change in logo can signal a fresh outlook on the part of the firm and its brand*". According to Baker and Balmer (1997) such strategic changes, symbolised by visual identity, can also reflect a change in organisational behaviour and corporate culture. Conveying changes of corporate strategy and organisational structure by using visual identity has been conceptualised by Balmer (1995) as part of his seven schools of thought. Balmer (1995:32) considers the strategic dimension of visual identity by the strategic-visual-school, arguing that "*the strategic visual school employs graphic design to signal a change*

in corporate strategy: the symbol acts as a rallying point for those within and outside the organization”.

Furthermore, visual identity has been argued to support positioning and differentiation strategy (Baker and Balmer, 1997; Schmitt et al, 1995), which are linked to corporate identity and image formation (Brown, 1998; Cornelissen and Elving, 2003; Melewar and Karaosmanoglu, 2006). Ries and Trout (1981) cited by Baker and Balmer (1997) argue that company names as one element of corporate visual identity can play a strategic role in the positioning strategy of a company. In addition, Karaosmanoglu and Melewar (2006) stress the strategic consequence of differentiation based on visual identity management. Karaosmanoglu and Melewar (2006:200) argue that visual identity provides “*a powerful way of differentiating the company, since they represent the distinctive attributes of a corporation*”. Moreover, Van Riel et al (2001) argue that a further beneficial outcome of visual identity is that it can lead to competitive advantage and improve corporate reputation. The following table (Table 3.2) summarises key consequences and benefits of corporate visual identity and supporting literature.

Table 3.2 – Key Consequences of CVI Management

Consequences of CVI Management	Supporting Literature
Culture / Personality / Identity	
Presents and expresses values, mission and philosophy, culture, behaviour, personality, specific and distinctive identity attributes of a company	Baker and Balmer (1997), Balmer (1998), Bernstein (1984), Dowling (1994), Karaosmanoglu and Melewar (2006), Melewar (2001)
Employees	
Provides focus for employees	Baker and Balmer (1997), Olins (1989), Dowling(1994)
Consumers	
Generates and increases familiarity, recognisability and trust and influences buying behaviour and buying decision	Melewar et al (2006), Van Riel et al (2001)
Communication / Image	
Supports effective corporate communication	Balmer (1995; 1998), Melewar and Karaosmanoglu (2006), Van Riel

	(1995)
Supports consistent communication	Bernstein (1984), Bick et al (2003), Dowling (1986), Gray and Smeltzer(1985; 1987), Van Riel (1995)
Communicates and conveys attributes and company characteristics such as quality, size, strength, reputation, prestige, style and fashionability and consequently has an effect on corporate image	Baker and Balmer (1997), Balmer (1998), Melewar and Karaosmanoglu (2006), Melewar and Saunders (1999)
Strategy	
Shows change in corporate strategy, supports differentiation and positioning strategy and helps to gain market profile and to competitive advantage and supports reputation through consistency	Baker and Balmer (1997), Balmer (1995; 1998), Karaosmanoglu and Melewar (2006), Melewar and Akel (2005), Melewar et al (2006), Ries and Trout (1981), Van den Bosch et al (2005), Van Riel et al (2001)
Financial Outcomes (In Relation to CVI Standardisation)	
Supports sales and gain of market share	Melewar and Saunders (1998)
Can influence the final stage of consumer behaviour (buying behaviour)	Melewar et al (2006)

Source: The Researcher

As the review of the literature shows, a variety of consequences of visual identity management has been put forward. Based on the conceptualised similarity of visual and auditory identity, this research consequently takes the view that companies not only recognise direct consequences of visual identity management but also of auditory identity management. In other words, companies that manage corporate auditory identity are of the view that they will achieve a variety of positive outcomes as a result of auditory identity management.

With regard to the operationalisation of auditory identity management, this research follows the perspective of Simões et al (2005) who argue that there are different degrees of corporate identity management by an organisation. That is, Simões et al (2005) argue that scales that measure corporate identity management “*should reflect the extent to which an organization actively manages aspects of its corporate identity*” (Simões et al, 2005:159). Drawing on the presented literature and rationale, the following section presents a set of hypotheses.

3.4.1 Strategic Benefits

Academic literature shows the link between visual identity and its role in gaining differentiation (Karaosmanoglu and Melewar, 2006) and providing a source for competitive advantage (Van Riel et al, 2001). Drawing on this rationale the following hypotheses with regard to auditory identity are presented:

H 8: Companies with a high degree of corporate auditory identity management are more likely to perceive ‘gaining differentiation’ as a positive outcome.

H 9: Companies with a high degree of corporate auditory identity management are more likely to perceive ‘gaining competitive advantage’ as a positive outcome.

3.4.2 Company Attributes

As mentioned above, particular company attributes (e.g. innovativeness, quality, strength, prestige, fashionability) can be communicated through visual cues (i.e. corporate visual identity). The sum total of attributes as perceived by the audience has been conceptualised as corporate image (e.g. Barich and Kotler, 1991; Bernstein, 1984; Gronroos, 1984). Accordingly, building on the relationship between visual identity and corporate image, the following hypothesis derives:

H 10: Companies with a high degree of corporate auditory identity management are more likely to perceive ‘improving corporate image’ as a positive outcome.

3.4.3 Corporate Communication

Based on the widely acknowledged role of visual identity elements (e.g. corporate logo) in supporting corporate communication (Balmer, 1995; 1998; Melewar and Karaosmanoglu, 2006; Van Riel, 1995) the following hypothesis is put forward:

H 11: Companies with a high degree of corporate auditory identity management are more likely to perceive ‘supporting corporate communication’ as a positive outcome.

Moreover, by drawing on the integrated communication paradigm, which encapsulates the view of consistency of all messages that are sent by an organisation (Bernstein, 1984; Bick et al, 2003; Dowling, 1986; Gray and Smeltzer, 1985; 1987; Van Riel, 1995) it is argued that by managing auditory identity, a company strives for consistency regarding its corporate communication. This leads to the following hypothesis:

H 12: Companies with a high degree of corporate auditory identity management are more likely to perceive ‘supporting consistent corporate communication’ as a positive outcome.

3.4.4 Identification of Employees

Visual identity not only has been conceptualised as conveying corporate identity to external audiences, but according to Dowling (1994:132) a logo also can become “*a badge of identification and membership*”. In addition, drawing on the notion of Olins (1989) cited by Baker and Balmer (1997) that visual elements can act as a source of identification and focus for employees, this research proposes the following hypothesis:

H 13: Companies with a high degree of corporate auditory identity management are more likely to perceive ‘strengthening identification of employees with the organisation’ as a positive outcome.

3.4.5 Consumer Perception and Attitude

Literature review indicates that an increase in recognisability, familiarity and trust (Melewar et al, 2006; Van Riel et al, 2001) are key outcomes of corporate visual

identity management. Drawing on this perspective, the following hypotheses are presented:

H 14: Companies with a high degree of corporate auditory identity management are more likely to perceive ‘increasing recognisability’ as a positive outcome.

H 15: Companies with a high degree of corporate auditory identity management are more likely to perceive ‘increasing familiarity’ as a positive outcome.

H 16: Companies with a high degree of corporate auditory identity management are more likely to perceive ‘generating trust’ as a positive outcome.

In addition, some authors have suggested a relation between elements of visual identity such as logos and the purchase decision as the final stage of consumer behaviour (Melewar et al, 2006). Drawing on this perspective, the following hypothesis is presented:

H 17: Companies with a high degree of corporate auditory identity management are more likely to perceive ‘influencing buying behaviour’ as a positive outcome.

Based on a broad range of literature, with a focus on the visual identity and corporate identity literature, the last section of this chapter has revealed key consequences of the visual dimension. Drawing on this review, hypotheses in relation to the consequences of auditory identity management have been presented.

In total, this chapter (Chapter 3) has presented two sets of hypotheses that are summarised in the following table (Table 3.3). The first set relates to antecedents of corporate auditory identity management while the second set reflects linkages between corporate auditory identity management and consequences as perceived by companies. Subsequently, this leads to the conceptual research framework as presented in Figure 3.1 on page 146.

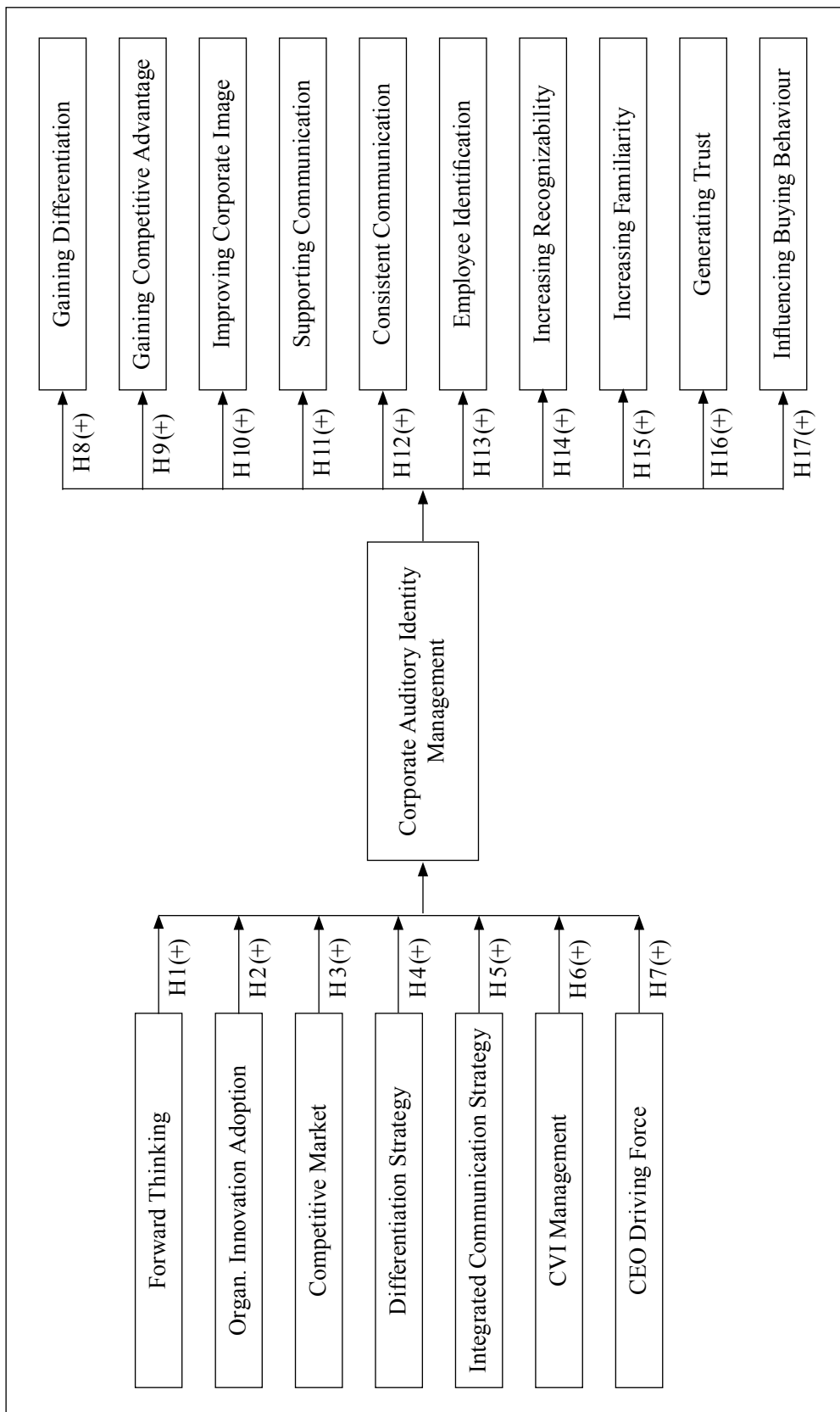
Table 3.3 – List of Hypotheses

Hypotheses (Antecedents)	
H1	Being a forward thinking organisation is positively related to a higher degree of corporate auditory identity management.
H2	Organisational innovation adoption is positively related to a higher degree of corporate auditory identity management.
H3	Companies that operate in a highly competitive market are more likely to have a higher degree of corporate auditory identity management.
H4	Companies that follow a differentiation strategy based on image are more likely to have a higher degree of corporate auditory identity management.
H5	Companies that emphasise integrated communication are more likely to have a higher degree of corporate auditory identity management.
H6	Corporate visual identity management is positively related to a higher degree of corporate auditory identity management.
H7	The role of the chief executive officer as internal driving force regarding auditory identity is positively related to a higher degree of corporate auditory identity management.
Hypotheses (Consequences)	
H8	Companies with a high degree of corporate auditory identity management are more likely to perceive ‘gaining differentiation’ as a positive outcome.
H9	Companies with a high degree of corporate auditory identity management are more likely to perceive ‘gaining competitive advantage’ as a positive outcome.
H10	Companies with a high degree of corporate auditory identity management are more likely to perceive ‘improving corporate image’ as a positive outcome.
H11	Companies with a high degree of corporate auditory identity management are more likely to perceive ‘supporting corporate communication’ as a positive outcome.
H12	Companies with a high degree of corporate auditory identity management are more likely to perceive ‘supporting consistent corporate communication’ as a positive outcome.
H13	Companies with a high degree of corporate auditory identity management are more likely to perceive ‘strengthening identification of employees with the organisation’ as a positive outcome.
H14	Companies with a high degree of corporate auditory identity management are more likely to perceive ‘increasing recognisability’ as a positive outcome.
H15	Companies with a high degree of corporate auditory identity management are more likely to perceive ‘increasing familiarity’ as a positive outcome.

H16	Companies with a high degree of corporate auditory identity management are more likely to perceive 'generating trust' as a positive outcome.
H17	Companies with a high degree of corporate auditory identity management are more likely to perceive 'influencing buying behaviour' as a positive outcome.

Source: The Researcher

Figure 3.1 – Conceptual Framework



Source: The Researcher

3.5 Control Variables

In addition to the hypothesised relations as presented in the research framework, this research considers various factors as control variables. The next sections depict the control variables that will be tested in relation to the research model.

3.5.1 Size of Company

Corporate identity programmes involving the change or adaptation of corporate logos can be very costly. Thus, managing visual identity requires internal funding (e.g. staff) and external investment (e.g. design agencies). According to Florida (2001) large organisations generally have more resources available in comparison to smaller companies (Florida et al, 2001). Moreover, Subramanian and Nilakanta (1996:635) argue that “*large organizations have greater resources to expend in the adoption and implementation of innovations*”. Consequently, the authors assert that the number of administrative innovations adopted is related to the size of an organisation (Subramanian and Nilakanta, 1996). Bhattacharya and Sen (2003) consider size of company as one demographic factor that constitutes traits of corporate identity. Low (2000) proposes a negative relation between the size of companies and integrated marketing communication. Low (2000) argues that this might be due to the involvement of different divisions and diverse responsibilities, which makes coordination of consistent communication activities difficult.

Moreover, company size also has been identified in a case study presented by Balmer and Stotvig (1997) as a factor that can influence corporate identity. Similar to visual identity management, it can be understood that managing auditory identity also requires internal and external resources. Drawing on the basic difference of financial resources available for large companies in comparison to small enterprises, this research treats ‘company size’ as control variable.

3.5.2 Type of Company

Industry sectors have been commonly categorised along three types, namely primary, secondary and tertiary sector (cf. Clark, 1957). Related to this categorisation, product/manufacturing companies (secondary sector) on the one hand and service companies (tertiary sector) on the other hand have been differentiated as two types of companies and have been considered in relation to corporate identity by various academics. That is, based on the fundamental differentiation between service and product, namely that goods are produced while services are performed (Goldkuhl and Styvén, 2007), the key characteristic of services has been defined as the intangibility of services (McDougall and Snetsinger, 1990). Bitner (1990) argues that service companies in comparison to manufacturer or product companies basically offer products that constitute intangible processes and the only tangible cues of a service company are the firm's physical facility (i.e. offices) and its employees. In order to overcome this intangibility companies generally try to make services more tangible (Goldkuhl and Styvén, 2007; Rushton and Carson, 1989). Moreover, customers aim to evaluate the expected intangible service capabilities by assessing factors such as noise level, scent, temperature, colours, textures, and comfort of furnishings, in addition to the physical elements (Bitner, 1990; Goldkuhl and Styvén, 2007).

Moreover, Van den Bosch et al (2006a) assert that while manufacturing companies that offer tangible products can present their corporate visual identity on products and packages, service organisations are lacking the possibilities to present the organisation and to convey the organisation's identity via any tangible results before the purchase. Thus, while product companies can present their identity via graphic design on physical products to the customer, services are nearly invisible before the purchase (Van den Bosch et al, 2006a). Drawing on this perspective, Van den Bosch et al (2006a:141-142) conclude that *“it may be that service organizations have to work harder to make themselves and their services visible”*.

Furthermore, De Chernatony and Cottam (2006) also compare two types of companies and argue that service companies have fewer tangible elements that can be used to differentiate them from its competitors. Low (2000) investigates the two

types of companies with regard to the level of integrated marketing communication and argues that service companies are more likely to apply integrated marketing communication in comparison to product firms. Drawing on this perspective, it could be argued that sound (i.e. auditory identity) can offer particular benefits for service companies in order to compensate for the lack of tangible products. McDonald et al (2001) supports this view by arguing that music can make service brands more tangible.

In addition, Van den Bosch et al (2006a) also revealed various differences between manufacturing and service companies with regard to the importance of corporate visual identity management instruments (e.g. up-to-date CVI guidelines, access to CVI guidelines, regular consultation with users, and technical tools). Based on the presented literature the developed conceptual research framework will therefore be tested for differences between service and product/manufacturing companies, thus, 'company type' will be treated as a control variable.

3.5.3 Corporate Identity Structure

Based on the categorisation by Olin (1989; 1995; 2008) corporate identity structure can be assigned to three types, namely (1) monolithic, as where a company uses one visual identity for all its activities, (2) endorsed, where the group name endorses all of the other company or brand names and (3) branded, where the company uses different apparently unrelated brands.

Balmer (2001a) points out that this categorisation reflects business reality to a rather limited extent. Balmer (2001a) in particular criticises a too simplistic conceptualisation of identity structures (i.e. the relation between parent companies and subsidiaries) as reflected in Olin's categorisation, and argues that these relations are far more complicated. Subsequently, Balmer and Gray (2003) argue that Olin's categorisation is outdated and propose an extended category comprising six elements (familial, shared, surrogate, supra, multiplex, federal). However, despite such a more detailed categorisation, Olin's (1989; 1995) model so far remains most influential.

According to Balmer and Wilson (1998) the widely applied monolithic identity structure frequently has been linked to the perspective that companies have one single culture (e.g. Deal and Kennedy, 1982). Many scholars however have criticised the idea of a monolithic, uniform and single corporate culture, in contrast advocating a more differentiated perspective, namely, considering culture as a combination of various subcultures within an organisation (Balmer, 1995; Balmer and Wilson, 1998; Melewar, 2003; Meyerson, 1991).

Moreover, Berens et al (2005) have investigated the effect of identity structure on aspects such as effective associations of corporate abilities and corporate social reliability associations. The authors argue that a strongly visible corporate brand (i.e. monolithic visibility) supports the impact of corporate ability and corporate social reliability associations on product evaluations.

Cornelissen and Elving (2003) link the managerial decision for one of the three identity structures to the formation of a desired corporate image and to the positioning strategy of a company. Furthermore, Melewar and Bains (2002) and Cornelissen and Elving (2003) refer to the banking sector as particularly being reflected by a monolithic corporate identity. This is in line with the view of De Chernatony et al (2003) who argue that monolithic identity strategies are predominantly applied by service companies. However, Gray and Balmer (1998) claim that a monolithic identity structure is adopted by a majority of small companies and in addition that a branded strategy has been frequently applied by consumer product companies.

Moreover, Melewar et al (2000) empirically tested the relationship between corporate identity structure and the standardisation of corporate visual identity. The findings suggest that organisational structure and identity structure are related and that companies with a monolithic identity structure are more likely to have a higher degree of visual identity standardisation as well as a more centralised organisation structure in comparison to companies with an endorsed or branded strategy.

In addition, Van Riel et al (2001) argue that a monolithic identity structure can serve as a common basis for all communication activities, which in turn is the foundation for a clear positioning strategy of an organisation. Similarly, Zinkhan et al (2001) refer to consistent messages and visual elements as characteristic aspects of a monolithic identity strategy. Drawing on the variety of aspects related to corporate identity structure, this research treats ‘identity structure’ as a control variable.

3.6 Summary

This chapter reviewed academic as well as anecdotal literature of corporate identity as well as related areas in order to establish relationships between antecedents and consequences of corporate auditory identity management, leading to of a set of hypotheses (Please see Table 3.3). Accordingly, the linkages that are expressed by the hypotheses have led to the conceptual research model (Please see Figure 3.1 on page 146). The next chapter (Chapter 4) lays out the research methodology and method that was adopted in this research.

4. Research Methodology and Method

4.1 Introduction

This chapter presents various aspects of the research methodology and research method adopted in this study. To start with, section 4.2 of this chapter outlines the philosophical foundation of the adopted research methodology and gives some rationale for following triangulation. In section 4.3 methods of data collection as well aspects of the research design and research setting such as country, industry and unit of analysis are outlined. Section 4.4 provides the rationale and outlines the design of the qualitative research element in this research. Subsequently, in section 4.5 key findings from qualitative research are presented. In section 4.6 the development of measurement scales including construct definition and item generation are presented. In addition, the design of the research instrument (i.e. questionnaire) is outlined and results from qualitative scale purification are presented. Section 4.7 discusses the process of data collection, including aspects such as target population, sampling frame and sampling procedure, the data collection procedure, the issue of non-response bias and ethical considerations. Finally, in section 4.8 statistical techniques that have been applied in this research for the analysis of the main quantitative data are outlined.

4.2 Justification of the Research Methodology

4.2.1 Philosophical Foundation of the Research

There is broad consensus that before embarking on any research the researcher needs to define a set of ontological and epistemological assumptions (Burrell and Morgan, 1979; Creswell, 2003; Deshpande, 1983), which will guide the research process in order to understand the research topic as well as to achieve valid results.

To start with, ontological considerations that take place on a more abstract level than epistemological considerations are basically concerned with “*the nature of social*

entities” (Bryman and Bell, 2007:22) and ask the question “*what is the nature of reality*” (Collis and Hussey, 2003:49).

There are two major ontological paradigms, namely objectivism (also known as realism) and constructivism (Bryman and Bell, 2007). While objectivism emphasises that social phenomena and their meanings exist independently from social actors, constructionism, in contrast, asserts that social phenomena and their meanings only exist as a result of the interaction of social actors (Bryman and Bell, 2007; Creswell, 2003).

Regarding research in social science, ontology is linked to the assumptions about whether the researcher considers the world as objective and external or as being socially constructed and that it can only be examined based on the perceptions of individuals (Collis and Hussey, 2003). In other words, ontology is concerned with the question of “*whether social entities can and should be considered objective entities that have a reality external to social actors, or whether they can and should be considered social constructions built up from the perceptions and actions of social actors*” (Bryman and Bell, 2007:22).

Epistemology is generally concerned with “*the study of knowledge and what we accept as being valid knowledge*” (Collis and Hussey, 2003:48). With regard to research in social science, epistemological assumptions focus on the relation between the researcher and the observed social phenomena, that is, the way the research is conducted (Corbetta, 2003). As with ontology, there are two major schools of thought of epistemology in social science, namely positivism and phenomenology, each of them being linked to an underlying ontological paradigm (Cassell and Symon, 1994; Collis and Hussey, 2003; Deshpande, 1983).

Positivism, whose origin has been linked to the French philosopher Auguste Comte (1853) (Easterby-Smith et al, 2002; Tashakkori and Teddlie, 1998), is based on the philosophical perception that the outside world is external to the researcher and that phenomena, which exist in the world can be observed and measured (Cassell and Symon, 1994; Corbetta, 2003). Tashakkori and Teddlie (1998:7) assert that

“positivism bases knowledge solely on observable facts”. Easterby-Smith et al (2002:28) argue that positivism reflects the view that *“the social world exists externally, and that its properties should be measured through objective methods, rather than being inferred subjectively through sensation, reflection or intuition”*. Referring to this definition, Easterby-Smith et al (2002:28) stress that positivism draws on the epistemological assumption that *“knowledge is only of significance if it is based on observations of this external reality”* and that it is based on the ontological paradigm of objectivism arguing that *“reality is external and objective”*.

In general, the positivistic paradigm is associated with the concept of deductive theory testing (Tashakkori and Teddlie, 1998), which aims to test hypotheses that reflect causal relationships that are based on existing literature and theories (Bryman and Bell, 2007; Deshpande, 1983). Moreover, the aim of deductive research includes the generation of conclusions that are generalizable and allow a revision of theory (Bryman and Bell, 2007; Deshpande, 1983). Denzin (1989) summarises positivism as consisting of the following characteristics: seeks objectivity, uses hypothetical-deductive theory, attempts to build external law-like statements, uses formal precise language, and separates facts from their meanings.

Phenomenology, which also sometimes is referred to as interpretivism, is the second major epistemological paradigm (Bryman and Bell, 2007). The phenomenological assumption is associated with a researcher’s observation of social phenomena as an individual’s interpretation of the world (Bryman and Bell, 2007) and rejects the *“quantification of phenomena”* (Cassell and Symon, 1994:4). In detail, the researcher observes the social phenomena in order to examine its characteristics and to make sense of causal relationships by interpreting the observations, while the subject develops and unfolds (Burrell and Morgan, 1979; Corbetta, 2003; Creswell, 1994).

With regard to the ontological foundation, phenomenology can be linked to the ontological paradigm of constructivism, which asserts that social phenomena and their meanings are socially constructed by individuals (Corbetta, 2003) and that *“there are multiple, constructed realities”* (Tashakkori and Teddlie, 1998:10). In other words, constructivism emphasises that *“reality is determined by people rather*

than by objective and external factors” (Easterby-Smith et al, 2002:30). Moreover, phenomenology is generally associated with inductive research that is linked to theory building (Bryman and Bell, 2007; Creswell, 2003). This is sometimes referred to as a reversed version of deductive research, which aims to generate theory based on observations (Bryman and Bell, 2007).

This research aims to examine the antecedents and perceived consequences of auditory identity management from an organisational perspective. In detail, a set of hypotheses has been developed from the literature and based on existing theory, which has been conceptualised in a process model that proposes causal relationships of constructs (See Chapter 3). Based on a theoretical framework this research focuses on theory testing and verification rather than theory generation, thus, embracing a deductive research approach. Consequently, drawing on the presented discussion on ontological and epistemological assumptions, this research largely adopts the epistemological paradigm of positivism, based on objectivism as the underlying ontological position.

However, even though this research predominantly takes a positivistic stance, thus focuses on quantitative research methods, the next section gives rationale for considering mixed methods and triangulation as beneficial concepts for this research.

4.2.2 The Qualitative - Quantitative Distinction and Triangulation

The two key epistemological perspectives of positivism and phenomenology, presented in the last section, frequently are linked to the split between qualitative and quantitative research (Bryman and Bell, 2007). While quantitative research methods are associated with positivism, qualitative research methods generally are associated with phenomenology (Deshpande, 1983; Tashakkori and Teddlie, 1998).

In detail, quantitative research covers basic characteristics such as emphasising a deductive approach and theory testing (Corbetta, 2003; Creswell, 2003), following the natural science model and positivism in particular. Thus, quantitative research

rather considers social reality as being an external and objective reality and builds on the ontological stance of objectivism (Bryman and Bell, 2007).

In contrast, qualitative research offers key characteristics such as putting an emphasis on words instead of numbers, taking an inductive approach and emphasising theory generation. Moreover, qualitative research generally rejects a natural science approach but rather considers how individuals interpret the social world, and refers to the ontological orientation of constructivism (Bryman and Bell, 2007; Creswell, 2003). In short, while qualitative research is concerned with “*understanding the social world through an examination of the interpretation of that world by its participants*” (Bryman and Bell, 2007:401) quantitative research focuses on theory testing and “*embodies a view of social reality as an external objective reality*” (Bryman and Bell, 2007:28).

However, there is some criticism associated with each of the two methods. Qualitative methods for instance are criticised for not being scientific, biased by the researcher’s subjective view, difficult to scrutinise or to repeat and restricted regarding the generalisation of results (Bryman and Bell, 2007; Payne and Payne, 2004). Quantitative research methods on the other hand have been argued to be superficial, to use measurement processes based on artificial precision, to separate the social world from the individual and generally to neglect the complexity of the social world (Bryman and Bell, 2007; Payne and Payne, 2004).

The general contradiction of these two research methods has led to a battle between theorists and researchers who either solely advocate the quantitative or qualitative paradigm (Tashakkori and Teddlie, 1998). What has been labelled “*paradigms wars*” was based on the perspective of research purists, arguing that quantitative and qualitative methods are incompatible (Tashakkori and Teddlie, 1998:11), based on the notion that “*research methods carry epistemological commitments*” and that “*quantitative and qualitative research are separate paradigms*” (Bryman and Bell, 2007:643)

However, many authors have criticised the dichotomisation of the two research methods, demanding a more pragmatic approach in order to overcome this battle (Tashakkori and Teddlie, 1998). Consequently, as a way to overcome the paradigms war, the pragmatism paradigm was postulated by Howe (1988), which is mainly based on a compatibility thesis, arguing that quantitative and qualitative methods are indeed compatible. The pragmatism paradigm focuses on the solution of problems and is not committed to one paradigm, hence, researchers “*are free to choose the methods, techniques, and procedures of research that best meet their needs and purposes*” (Creswell, 2003:12). Based on this paradigm, researchers are able to combine both research methods, which leads to the concept of triangulation (Tashakkori and Teddlie, 1998).

Triangulation has been broadly defined as “*the combination of methodologies in the study of the same phenomenon*” (Denzin, 1989:234). Bryman and Bell (2007:643) assert that “*triangulation entails using more than one method or source of data in the study of social phenomena*” and define triangulation as “*an approach to the development of measures of concepts, whereby more than one method would be employed in the development of measures, resulting in greater confidence in findings*”.

The notion of increasing confidence of findings due to triangulation can be linked to the initial conceptualisation of triangulation by Webb et al (1966:3) who have argued that “*the most persuasive evidence comes through a triangulation of measurement processes*”. In addition, Jick (1979) points out that triangulation can help to identify unexpected dimensions of a phenomena as well as enriching the explanation of research findings. Generally, triangulation has been argued to be beneficial in all aspects of research (Deshpande, 1983). Deshpande (1983:108-109) points out “*the contribution that a set of methodologies can make to one another cover all aspects of theory confirmation - research design, data collection and data analysis*”.

Even though this research predominantly adopts a positivistic paradigm it acknowledges the benefits of a triangulated research approach (Deshpande, 1983) by integrating inductive investigation methods in the first phase of the research. That is,

gathering qualitative data precedes the collection of quantitative data. With regard to the four main types of triangulation, namely theoretical, data, investigator and methodological triangulation (Denzin, 1989; Easterby-Smith et al, 2002; Tashakkori and Teddlie, 1998), this research applying methodological triangulation, which is associated with the “*use of both qualitative and quantitative methods and data to study the same phenomena within the same study or in different complementary studies*” (Tashakkori and Teddlie, 1998:18).

In particular, this research triangulates research methods for the following main reasons: Literature review has revealed that research regarding auditory identity in the marketing and identity literature has not been conducted to a great extent. Consequently, by carrying out qualitative exploratory field work further insight about the construct is gained, which leads to a better understanding and definition of the focal construct (Creswell, 2003; Jick, 1979). In addition, interviewees’ expertise on the subject matter provides valuable scrutiny of the developed causal process model and the proposed hypotheses of this research (Bryman and Bell, 2007). Furthermore, qualitative data derived from participants’ views, was beneficial for the development of measurement scales (Bryman and Bell, 2007). Moreover, qualitative data was used to reflect on the outcome of the main quantitative research, that is, to deepen subsequent data analysis and consequently to enrich explanation of the findings (Bryman and Bell, 2007; Creswell, 2003; Jick, 1979). In the following section the research design and research methods based on the presented discussion are be described.

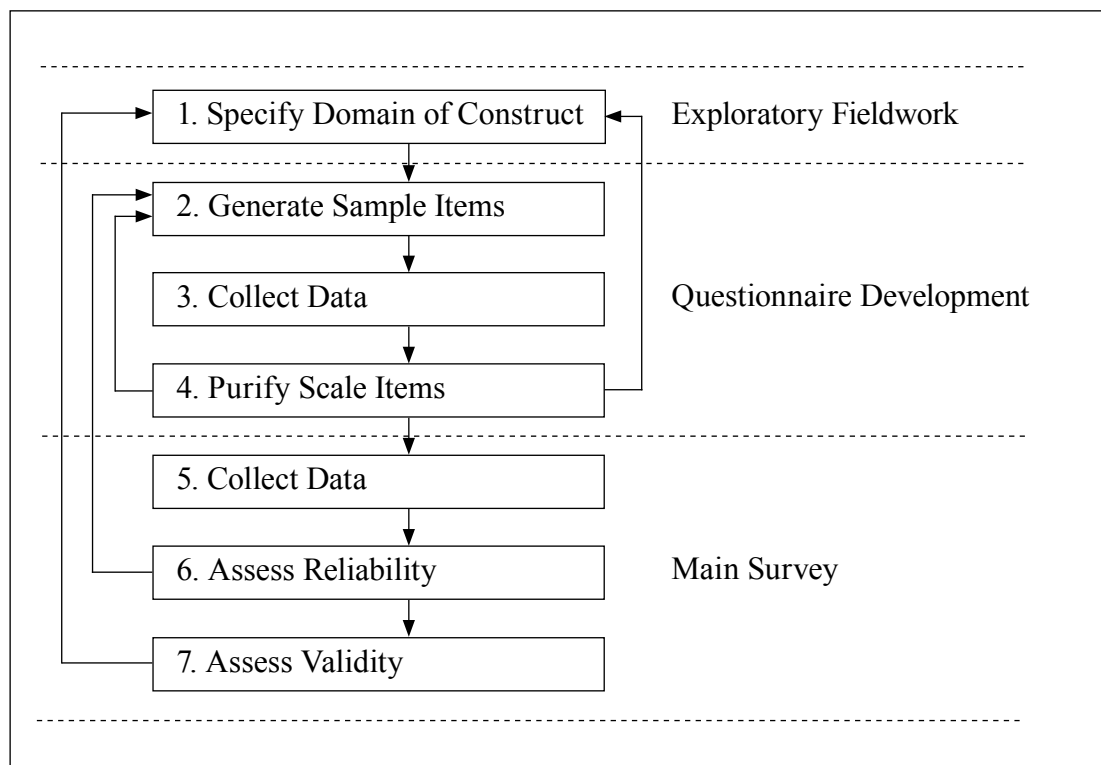
4.3 Research Design and Research Methods

Based on the presented benefits of the triangulation of research methods (Bryman and Bell, 2007; Creswell, 2003; Deshpande, 1983; Jick, 1979), this research employs qualitative and quantitative methods, which leads to two research phases. The first phase, which precedes the main quantitative survey, embraces exploratory fieldwork. In detail, semi-structured interviews with experts in the field such as identity and branding consultants and marketing managers were conducted in order to gain

insight about the research topic and to reveal additional dimensions of the topic that might not have been derived from the existing literature (Zikmund, 2003).

The second phase is associated with the main quantitative survey. In detail, this phase started with the development of the survey questionnaire, which comprises the generation of measurement items that capture the constructs included in the conceptual process model, based on existing literature as well as data from the qualitative phase. Subsequently, the measurement scales were purified using qualitative techniques. Finally, the main quantitative data collection using a printed and web-based questionnaire was conducted. In order to define items that measure the constructs that are used in this research, the procedure of multi-item scale development proposed by Churchill (1979) (Please see Figure 4.1 on page 159) which integrates qualitative research as a preceding phase of item generation was generally employed.

Figure 4.1 – Procedure for Developing Measurement Scales



Source: Adopted from Churchill (1979)

This research first draws on the literature in the corporate identity and corporate visual identity area in order to define the corporate auditory identity construct, to put forward hypotheses as well as to develop the conceptual process model. In addition to existing literature, qualitative research which includes semi-structured interviews with experts was used to scrutinise the proposed hypotheses and framework and to offer guidance for the development of scale items (Churchill, 1979). Furthermore, in order to test the hypotheses, quantitative research methods using questionnaires for data collection were applied and appropriate statistical techniques were used.

4.3.1 Research Settings

The decision where a specific research takes place is a crucial aspect for conducting successful research (Baker, 1999; Bernard, 2000). Whetten (1989:492) argues that contextual factors such as the location of the research not only “*place limitations on the propositions generated from a theoretical model*” but also “*set the boundaries of generalizability, and as such constitute the range of the theory*”.

4.3.1.1. Country

So far, a lot of research in the corporate identity and visual identity area has been placed in western countries such as the US, the United Kingdom or the Netherlands (e.g. Baker and Balmer, 1997; Balmer, 2001b; Henderson and Cote, 1998; Melewar and Akel, 2005; Simões et al, 2005; Van den Bosch et al, 2004; 2006a; Van den Bosch et al, 2006b; Van Riel et al, 2001). Accordingly, scales that measure constructs such as corporate identity management (Simões et al, 2005) or corporate visual identity consistency (Van den Bosch et al, 2004; 2006a; Van den Bosch et al, 2006b) mainly have been developed in western industry settings.

Moreover, western countries such as the US, the United Kingdom or the Netherlands provide a well-developed business environment with regard to the conceptual and practical use of corporate and marketing communication activities. In detail, the researcher is of the view that companies from western countries such as the United Kingdom encompass adequate familiarity and experience with aspects such as

corporate identity and visual identity, which, for instance, is reflected by the annual turnover of £ 4.4 billion in 2007/08 of the UK design industry (The British Design Industry, 2008).¹ Consequently, based on the aspects presented above, both phases of this research, i.e. the qualitative as well as the quantitative phase, took place in the United Kingdom. Hence, this research capitalises on the familiarity of consultancies and companies with the research subject for the qualitative as well as the quantitative phase. In addition, by conducting this research in the UK, the researcher takes into consideration the option to use measurement scales that previously have been tested in comparable business settings.

4.3.1.2. *Industry*

With regard to the industry context, this research is placed in the media, information and communication as well as the banking and finance industry. The key rationale for focusing on those industries derives from the findings of the qualitative research that has been conducted as part of this research. In detail, qualitative data provides evidence that in the selected industries the topic of auditory identity management appears to be more relevant or has been applied to some considerable degree in comparison to other industries. That is, several of the respondents argued that it is mainly companies of the media industry, including companies such as mobile phone networks, cinemas, broadcasting companies and IT companies that are most likely to have implemented sound at this stage. For instance, one brand consultant stated: “*So almost by definition the BBC and every television programme has an auditory identity and some of those are, theatre, cinema, cinema brands and cinema distribution brands*” [Brand Consultant #1]. Similarly, another brand consultant pointed out when asked where auditory identity most likely has been put into practice already, “*the simple answer to that is companies that are somehow involved in the media business. [...] So obviously media companies, whether it's Virgin media or Sky, or those people*“ [Brand Consultant #5]. As a result of these findings, the media,

¹ Additional indicators for the importance of topics such as corporate and visual identity and thus for the experience of UK companies with the topic is the turnover of £ 15 billion for the UK design businesses and of £ 7.6 billion for UK design consultancies in 2009 (Design Council, 2010).

information and communication industry has been selected as the industry setting of this research.

In addition, based on the response of several respondents arguing that sound and music are more relevant for organisations that operate in a service focused industry, the finance and banking industry was selected since this industry sector can be considered to represent a typical service focused industry (For more evidence regarding the identification of particular industries based on qualitative findings please see Section 4.5.1.8 on page 186).

In order to more precisely structure and define the selected industries, the researcher initially has identified the selected industries based on the United Kingdom Standard Industrial Classification of Economic Activities (SIC) published by the Office for National Statistics, which is used “*to classify business establishments and other standard units by the type of economic activity in which they are engaged*” (Office for National Statistics, 2009a). In detail, in a first attempt the researcher examined the latest version of the UK SIC from 2007. Based on the UK Standard Industrial Classification of Economic Activities 2007 (2007; 2009b), the following industry categories were selected to reflect the chosen industries most appropriately.

First and foremost ‘Section J - Information and Communication’ was defined as one of the focus industry of this research. Section J is broadly defined by the Office for National Statistics as containing the following industry sectors: “*This is a major new sector and brings together publishing, motion picture and sound recording industries, broadcasting (radio and TV industries), telecommunications, internet activities, and other news services*“ (Office for National Statistics, 2009b:8). In addition, the Office for National Statistics (2007:9) provides the following more detailed definition of Section J: “*A new section J (Information and communication) has been created, combining activities involving production and distribution of information and cultural products, provision of the means to transmit or distribute these products, as well as data or communications, information technology activities and the processing of data and other information service activities. The main components of this section are publishing activities, including software publishing*

(division 58), motion picture and sound recording activities (division 59), radio and TV broadcasting and programming activities (division 60), telecommunications activities (division 61) and information technology activities (division 62) and other information service activities (division 63)”. Based on this definition, six subcategories of ‘Section J - Information and Communication’ were selected for this study. In addition, one subcategory of ‘Section M - Professional, Scientific and Technical Activities’, namely ‘Advertising and Market Research’, was identified as part of the set of relevant industries (Please see Table 4.1 on page 164).

Moreover, qualitative findings from interviews suggest that since service organisations have to market intangible products (i.e. service) rather than tangible products they are more likely to adopt auditory identity as an additional company controlled communication element. Drawing on this finding, the financial/banking industry was selected to be included in this research setting as it represents one of the most typical service industries. According to UK SIC 2007, ‘Section K - Financial and Insurance Activities’, is defined as including “*financial service activities, including insurance, reinsurance and pension funding activities, and activities to support financial services. This section also includes the activities of holding assets, such as activities of holding companies and the activities of trusts, funds and similar financial entities*”. Consequently, three subcategories of ‘Section K - Financial and Insurance Activities’ were included.

In addition to the fact that the finance/banking sector is strongly service focused, a number of research has been put forward that investigate corporate identity and related topics in the context of the financial service and banking sector over the last decades (Balmer and Stotvig, 1997; Melewar and Bains, 2002; Melewar and Navalekar, 2002; Morrison, 1997; Nguyen and LeBlanc, 1998; Van Heerden and Puth, 1995; Wilkinson and Balmer, 1996; Worcester, 1997). The existence of such literature was considered by the researcher to provide support for the analysis of research results. The following table (Table 4.1 on page 164) depicts the categories and subcategories according to the UK SIC 2007 classification that in an initial step were defined to constitute the focus industries of this research.

Table 4.1 – Selected Categories and Subcategories based on UK SIC 2007

Section J – Information and Communication	
58	Publishing Activities
59	Motion Picture, Video and Television Programme Production, Sound Recording and Music Publishing Activities
60	Programming and Broadcasting Activities
61	Telecommunications
62	Computer Programming, Consultancy and Related Activities
63	Information Service Activities
Section M – Professional, Scientific and Technical Activities	
73	Advertising and Market Research
Section K – Financial and Insurance Activities	
64	Financial Service Activities, Except Insurance and Pension Funding
65	Insurance, Reinsurance and Pension Funding, Except Compulsory Social Security
66	Activities Auxiliary to Financial Services and Insurance Activities

Source: Office for National Statistics (2007:63-69)

However, when examining possible databases for company addresses such as D&B (formerly Dun & Bradstreet) or FAME in order to establish the target population for this research, the researcher had to learn that these databases so far had not adopted the latest UK SIC 2007 categorisation. In fact, by the time this research was conducted the two databases (D&B and FAME) still were based on the UK SIC 2003 classification (Office for National Statistics, 2003).¹ As a result, the researcher decided to build the industry categorisations for this research in accordance with the UK SIC 2003 rather than the UK SIC 2007 classification. In detail, the researcher identified those categories of the UK SIC 2003 classification that best matched the categories of the initially selected UK SIC 2007 classification (Please see Table 4.1 on page 164). The following table (Table 4.2) depicts the categories or subcategories that were selected to represent the media, information and communication industry

¹ On request the researcher was told that for the D&B database there was no intention to change the categorisation from the UK SIC 2003 to the UK SIC 2007 classification in the near future.

as well as the finance and banking industry based on the UK SIC 2003 classification.¹

Table 4.2 – Selected Categories and Subcategories based on UK SIC 2003

22	Publishing, Printing and Reproduction of Recorded Media
22.1	Publishing
	22.11 Publishing of Books
	22.12 Publishing of Newspapers
	22.13 Publishing of Journals and Periodicals
	22.14 Publishing of Sound Recordings
	22.15 Other Publishing
64	Post and Telecommunications
64.2	Telecommunications
	64.20 Telecommunications
65	Financial Intermediation, Except Insurance and Pension Funding
	65.1 Monetary Intermediation
	65.2 Other Financial intermediation
66	Insurance and Pension Funding, Except Compulsory Social Security <i>(all subcategories included)</i>
67	Activities Auxiliary to Financial Intermediation <i>(all subcategories included)</i>
72	Computer and Related Activities
72.2	Software Consultancy and Supply
	72.21 Publishing of Software
74	Other Business Activities
74.4	Advertising
	74.40 Advertising
92	Recreational, Cultural and Sporting Activities
92.1	Motion Picture and Video Activities
	92.11 Motion Picture and Video Production
	92.13 Motion Picture Projection
92.2	Radio and Television Activities
	92.20 Radio and Television Activities

Note: Selected categories and subcategories are highlighted in bold.

Source: Office for National Statistics (2003)

¹ For a full list of all sections, subsections, divisions, groups, classes and subclasses that constitute the UK SIC 2003 classification please see “UK Standard Industrial Classification of Economic Activities 2003” by the Office for National Statistics (2003).

In order to obtain a list of companies operating in the selected industry sectors that can be contacted for data collection (i.e. sampling frame) in a next step the researcher contacted the Chartered Institute of Marketing (CIM) in the UK. The Chartered Institute of Marketing as the “*the world’s largest organisation for professional marketers*” (The Chartered Institute of Marketing, 2010) was considered by the researcher to be a highly reliable source to obtain a list of professionals that hold positions such as communication manager, branding manager or marketing manager for which the research instrument (i.e. questionnaire) was designed.

Unfortunately, after contacting the Research Information Department at the Chartered Institute of Marketing via email, the researcher was told that the CIM is not able to provide such a list directly. Instead, the Research Information Department at the Chartered Institute of Marketing recommended obtaining addresses from AP Information Service (APIS).¹ APIS publishes various business directories and, according to their corporate website, provides “*a range of B2B directories, online data services and business mailing lists derived from our highly accurate database of over 200,000 named contacts at more than 50,000 major UK companies*” (AP Information Services, 2010).

Based on the recommendation of the Chartered Institute of Marketing and after reviewing the directories available at APIS, the researcher decided to obtain individual contact details from APIS. Unfortunately, while reviewing the APIS directory it also became clear that the APIS directory did not exactly match the UK SIC 2003 or the UK SIC 2007 categorisation but instead applied its own industry classification. Nevertheless, after comparing the three categorisations in more detail (i.e. UK SIC 2003, UK SIC 2007 and APIS), the researcher concluded that the industry categorisations used by APIS, despite the fact of being broader, still reflect the standard UK SIC 2003 and 2007 categories to an acceptable degree. Consequently, the researcher identified those categories of the APIS classification

¹ AP Information Services is a trading name of Waterlow Legal and Regulatory Ltd, which is a division of the Wilmington Group PLC.

that best matched the categories of the previously defined UK SIC 2003 classification.

The following table (Table 4.3) depicts the categories that were selected to represent the media, information and communication industry as well as the finance and banking industry based on the industry categories used by APIS.

Table 4.3 – Finally Selected Categories based on APIS Classification

No.	Category Name
08	Electronics & Electrical Engineering
09	Computer & Electronic Product Manufacturing
21	Media, Publishing & Communications
22	Telecommunications
23	Computer Software
25	Internet & E-Commerce
26	Banking, Finance & Insurance

Source: AP Information Services (2010)

To sum up, the process of defining the industry categorisations for this research included three steps, based on the three classifications as provided by UK SIC 2007, UK SIC 2003 and APIS. Even though the industry categorisations as defined by APIS instead of the UK SIC 2007 or UK SIC 2003 categorisation were finally used to classify the selected industries for this research, the researcher strongly considers this process of firstly defining the industries according to UK SIC 2007 and UK SIC 2003 as a beneficial process, allowing to get a clearer and more precise picture of the relevant industry categories.

4.3.1.3. *Unit of Analysis*

Defining the unit of analysis is one of the first steps in any research project (Bernard, 2000) and requires the researcher to consider on which level the data collection takes place (Zikmund, 2003). Unit of analysis has been defined as “*the social object to which the properties investigated appertain*” (Corbetta, 2003:66) and as “*the entity that forms the basis of any sample*” (Easterby-Smith et al, 2002:44). The unit of

analysis generally is determined by the research question (Bryman and Bell, 2007). Consequently, based on the fact that this research investigates antecedents and perceived consequences of auditory identity from an organisational perspective, the unit of analysis for the qualitative and quantitative phase of this research is the company (organisation).

4.4 Qualitative Research

4.4.1 Reasons for Qualitative Research

Exploratory research is required when there is little knowledge available about the phenomenon (Churchill Jr. and Iacobucci, 2004) and in particular if there are no reliable and quantitative measures of the construct available (Patton, 2002). Based on this rationale, an exploratory phase was considered by the researcher to be vital. In detail, qualitative data was collected in this study for the following main reasons:

- To unfold the surrounding areas of a phenomena (Carson et al, 2001; Jick, 1979) and to gain in-depth understanding of the research subject, in particular since auditory identity is a new area and research is underdeveloped (Churchill, 1979; Zikmund, 2003)
- To assess the relevance of the research questions in a practical environment
- To refine and revise the preliminary hypotheses and process framework
- To generate scale items for the development of the survey questionnaire (Churchill, 1979; Diamantopoulos and Souchon, 1999)
- To increase the validity of the research findings (Deshpande, 1983) and to obtain a richer explanation of research outcomes (Creswell, 2003; Jick, 1979)

Overall, starting with a qualitative exploratory research phase the researcher gained a better understanding of the different facets of auditory identity and the perceptions of organisations towards this topic, before embarking on the subsequent quantitative phase of this research (Creswell, 2003). In particular, by investigating the perspective of managers, additional insight was gained regarding corporate identity, visual identity and auditory identity, which, similar to the data gathered at consultancies,

helped to improve validity of the process framework as well as supported the development of measurement scales (Churchill, 1979).

4.4.2 Research Methods for Collection of Qualitative Data

Qualitative data was gathered through twelve semi-structured face-to-face interviews with single respondents from identity, brand and sound consultancies as well as marketing and brand managers of multinational companies in the UK. Interview guidelines were used throughout, covering specific topics while still allowing sufficient margin for the interviewees on how to reply (Bryman and Bell, 2007). The interview guidelines consisted of eight questions for agencies and nine questions for companies (Please see Appendix 2 on page 354 and Appendix 3 on page 356). The interviews covered aspects of corporate identity management, visual identity and auditory identity with regard to the perception of the agency as well as the perception of their clients.

Interviews were conducted with consultants from London based design and consulting agencies as well as marketing, brand and design managers from companies based in the UK. Interviewees were drawn based on the list of members of the Corporate Advisory Board of Brunel Business School, which was hoped to provide a good way of increasing the number of approval for an interview. Among others, who cannot be named for confidentiality reasons, experts such as communication scholar David Bernstein and sound expert Daniel Jackson as well as consultants from leading brand and design agencies have agreed to share their view on the auditory research topic. Owing to the general high profile of the interviewees, the available time and thus the length of the interviews did vary. In detail, interviews lasted between 30 and 120 minutes (Please see Table 4.4 on page 170).

All interviews were digitally recorded and afterwards transcribed in form of 'intelligent verbatim' into a word processor. For the subsequent coding of the qualitative data the NVivo 7.0 software package was used. The data of the interviews was analysed following the principles of content analysis, which according to Patton (2002:463) involves "*identifying, coding, categorising, classifying, and labelling the*

primary patterns in the data”. Furthermore, Easterby-Smith et al (2002) argue that this method is useful if hypotheses and defined categories are being tested.

Table 4.4 – Details of Interviews with Consultants and Managers

Date	Interviewee	Agency / Company	Duration
26.09.2008	Brand Consultant #1	Agency	30 min
30.09.2008	Communication Consultant #1	Agency	60 min
01.10.2008	Design Manager #1	Company	45 min
03.10.2008	Marketing Manager #1	Company	40 min
14.10.2008	Design Manager #2	Company	30 min
17.10.2008	Sound Expert #1	Agency	30 min
23.10.2008	Sound Expert #2	Agency	60 min
28.10.2008	Brand Consultant #2	Agency	45 min
30.10.2008	Corporate Reputation Consultant #1	Agency	40 min
10.11.2008	Brand Consultant #3	Agency	30 min
10.11.2008	Brand Consultant #4	Agency	60 min
10.11.2008	Brand Consultant #5	Agency	50 min

Accordingly, based on the categories and hypotheses that have been conceptualised as a result of reviewing the literature, interviews consequently were classified and analysed primarily by deductive content analysis based on key words or themes (Hinkin, 1995; Krippendorff, 1980; Miles and Huberman, 1994). However, in addition to predominantly applying deductive content analysis, to some minor degree inductive content analysis was adopted since some new aspects and themes of the topic emerged during the analysis.

The next section presents key findings of the qualitative research phase regarding corporate auditory identity management and antecedents and consequences of corporate auditory identity management.

4.5 Key Results of Qualitative Research

Overall, qualitative data provided valuable information with regard to various aspects such as the proposed definition of the corporate auditory identity construct, the overall role of sound as well as to the proposed antecedent factors and perceived consequences of corporate auditory identity management.

4.5.1.1. Definition of the Construct

Starting with the conceptualisation of the construct of corporate auditory identity, which is defined in this research as “*an assembly of auditory cues by which an audience can recognize the company and distinguish it from others*” (Bartholmé and Melewar, 2011a:95; 2011b:62) findings suggest that the proposed definition captures and reflects the domain appropriately. That is, the majority of respondents largely agreed with the definition. For instance, the aspect of differentiation, which is a key aspect of the definition, was also stressed by one interviewee:

“That seems to me a very good definition because it stresses the differentiation side.” [Corporate Reputation Consultant #1]

Similarly, one respondent agreed to the definition, also referring to the aspect of differentiation:

“I agree with that definition. So it’s a good definition. There’s nothing in the dictionary to compare it against yet so it’s the total of all a company’s distinguishable, defence able, differentiating sound. So I just found a less simple way of putting than you.” [Sound Expert #1]

Some few respondents suggested expanding the definition by adding further aspects to it. For instance, one interviewee was of the view that the definition might also include the aspect of acoustics of a room:

“I mean acoustics is another kind of thing that informs brand experience which isn’t covered by audio cues.” [Brand Consultant #5]

In particular, the respondent differentiated between cues that are deliberately sent by a company such as an audio logo and that are consciously experienced by consumers and on the other hand of acoustics of a room that are not actively noticed:

“I think the atmospheric sound of a brand experience can still be defined. But it’s like it’s happening in a kind of semi-conscious or subconscious level. A cue is obviously like it’s designed for you to take notice of it.” [Brand Consultant #5]

However, despite the fact that auditory elements such as a sonic logo are more likely to be noticed consciously whereas environmental sound might be sensed on a more subconscious level, both types of sound can be designed and actively managed by an organisation. For that reason, the facet of acoustics is covered by the term of auditory cue as part of the definition of corporate auditory identity.

Another interviewee also in essence agreed to the proposed definition but in addition was referring to the aspect of experience and emotional association with an organisation:

“It may go a little further than just how it makes a company distinctive from other companies; One might even go to say that if it’s done properly it might be a means of engaging with various audiences to give a, if you like a better and more positive experience of that company or brand. So I think it goes beyond being distinctive to some sort of emotional connection being made between the company or brand and the people it wants to reach.” [Brand Consultant #3]

This view clearly refers to the aspect of desired outcomes of auditory identity management as conceptualised in this research. However, whereas achieving recognition and differentiation are considered to be most fundamental and direct outcomes of corporate auditory identity (cf. Melewar, 2003), thus being part of the definition, providing a positive experience and strengthening the emotional relationship with an organisation are conceptualised as less direct outcomes. For that reason, the proposed definition of corporate auditory identity focuses on the two key aspects of recognition and differentiation.

One aim of the qualitative research also was to shed light on the question whether for auditory identity the fundamental distinction between ‘elements’ and ‘applications’ applies as conceptualised in visual identity literature (e.g. Baker and Balmer, 1997; Melewar, 2003; Van den Bosch et al, 2006b) (Please see Chapter 2). When applying the two-fold taxonomy (i.e. element and application) to the auditory dimension, findings from interviews generally indicate strong parallels between visual identity and auditory identity. The majority of respondents agree that a basic distinction between elements and applications should be expected, similar to visual identity. As one interviewee put it:

“Ideally yes you would have the auditory component and then you’d push it into different executional applications.” [Brand Consultant #2]

One interviewee particularly referred to the five elements of visual identity, supporting the idea that a similar approach for auditory identity might be appropriate:

“I don’t know what the five are to begin with, but I should imagine you would have to do something like that.” [Communication Consultant #1]

Some of the interviewees directly applied the proposed categorisation of element and application to their own organisation, which indicates a general agreement with such a categorisation. For instance, as the head of design of an international airline stated:

“So for example you could have [name of particular song] as the element and then you could have that as boarding music or in advertising or so on and so forth. [...] So maybe there are ways in which we’re starting to look at different applications of that one element, [...].” [Design Manager #2]

One interviewee in particular was referring to examples of applications of visual and auditory identity:

“So, whereas in graphic design it will be a letterhead or the livery on the side of a van; in audio design it’s going to be the background music to a TV commercial or an on-hold system or it could be a promo or

anything that's... or a ring tone. These are different places where you use parts of your identity and can express things in different ways."

[Sound Expert #1]

In essence, findings indicate that borrowing the concept of a basic distinction between elements and applications from the visual identity literature is legitimate. As one interviewee stated:

"I don't see that they're so fundamentally different that we need a different model of thinking about them." [Corporate Reputation

Consultant #1]

A further finding of this qualitative research is that numerous interviewees support the fundamental conceptualisation of auditory identity as one element of corporate identity management. For instance one respondent stated:

"I think if an organisation has its act together, has a focus on identity and communications and has its act together in those areas, then it'll well manage its visual identity well, and is also more likely to have considered auditory identity management, so it's a parallel thing."

[Brand Consultant #1]

The same interviewee continued:

"If you do do it well you stand out, and it can differentiate you, and it can be a very valuable part of your sort of corporate and communications tool kit. [...] Where we really need to achieve cut through and we want something distinctive would lead to a strong auditory identity, because I think it can be such a powerful tool."

[Brand Consultant #1]

Similarly, another interviewee was referring to the auditory dimension as an element of corporate identity management in terms of a projective concept of disseminating what the company stands for:

"I think a company that's clear about that will think through visual identity, different forms of communication, different forms of

advertising and also the auditory side as to how we can use all of these tools to convey what we want to convey; to tell the story and get over about the company, the way we want the company to be seen.”
[Corporate Reputation Consultant #1]

Overall, the majority of interviewees acknowledge auditory identity as a constituent of corporate identity and consequently of corporate identity management.

4.5.1.2. *Organisational Characteristics*

As presented in Chapter 3, this research links two organisational characteristics with corporate auditory identity. That is, organisations that are ‘forward thinking’ as well as organisations with a high degree of ‘innovation adoption’ are considered to more actively manage auditory identity. Results from interviews provide some evidence for these linkages.

Several interviewees have characterised companies that emphasise the management of auditory identity by descriptions such as ‘having a listening culture’, ‘deeper thinking’ and ‘forward thinking’. For instance one interviewee pointed out that:

“As a general impression I’d say they’re the more professional and deeper thinking companies about the whole communication mix. [...] the deeper thinking companies tend to be more forward thinking as well.” [Corporate Reputation Consultant #1]

This characterisation could be associated with organisations that generally respond more flexible to new developments and are more open for innovation adoption. In addition, one respondent was referring to the organisational characteristics of ‘listening’, which also can be linked to the notion of ‘forward thinking’.

“I think organisations which have got a listening culture probably are more ready to be sensitive to sound.” [Sound Expert #2]

Moreover, some respondents were of the view that organisations that are open to innovative developments and are less averse towards change in terms of their way of

communicating are more likely to include the auditory dimensions. As one interviewee argued:

“And I think it’s those who see change as an opportunity who are more attuned to this kind of thinking including the use of auditory cues and auditory ways of communicating the corporate brand.” [Corporate Reputation Consultant #1]

Furthermore, the interviewee continued that companies that develop long-term communication strategies, thus who can be described as ‘forward thinking’ are more likely to employ innovative communication tools such as web-based communication including auditory elements.

“... part of the role and increasing role I guess of auditory cues will be in web-based communications. [...] companies who, in my experience, are thinking most and thinking most positively about web-based communications are the companies who generally are more looking at the horizon and seeing, not just how do I communicate in the next quarter but how do I communicate ten years from now.” [Corporate Reputation Consultant #1]

4.5.1.3. Market Conditions, Corporate Strategy and Communication Strategy

Companies that operate in highly competitive markets and that strive for additional differentiation are conceptualised in this research to emphasise the management of auditory identity. Qualitative findings provide some evidence for these linkages. For instance, one interviewee pointed out that retailers most likely would use sound in order to improve their business in a competitive environment:

“[...] you would think that the greatest beneficiaries of the [auditory] approach would be retailers in very competitive markets because sound can actually have a direct effect on their sales immediately by changing the soundscape of a shop [...].” [Sound Expert #2]

In a more general way, another respondent also supported the view that strong competition can be considered to be a driving factor for an increasing use of sound:

“[...] a tougher business environment will actually accelerate the development of those things because companies are looking for any way that they can get competitive edge and this is one of those ways.”

[Corporate Reputation Consultant #1]

Moreover, the decision of a direct competitor to use sound can induce a company to apply sound as well. As one interviewee pointed out:

“If the competitors started doing it that would be the trigger.” [Design Manager #1]

Overall, the pressure of a highly competitive business environment, linked with the increasing need for standing out from the crowd is considered to be a crucial factor in determining to put more emphasis on aspects such as auditory identity. One interviewee summarised as follows:

“[...] the greater the competition and the bigger the threat from new entrants I think the harder companies need to think about continuing to maintain an advantage in their market. And therefore you look wider and possibly more deeply at all the things out there so I think it's bound to give greater consideration to anything that may be sensory and auditory is part of that.” [Brand Consultant #3]

However, with regard to the proposed linkage between emphasising integrated communication and the degree to which a company exploits auditory identity, findings provide rather divided results. One interviewee clearly expected such a linkage:

“They [companies that focus on integrated communication] take a more holistic view of the communication mix and the elements of communication.” [Corporate Reputation Consultant #1]

The interviewee elaborated on this perspective as follows:

“I think so because they're thinking in a thorough way about how the messages are going to convey what the umbrella of this is and then how the component parts will support and re-emphasise and mutually

support each other. And I think if you're doing that you're more likely to think of well what are all the different component parts of our communication and how can we make them all work together rather than work in isolation. And that certainly, that line of thought takes you into thinking about the use of visual identity and the use of auditory identity.” [Corporate Reputation Consultant #1]

In contrast to this view, another interviewee could not see such a relation at the moment. In detail, the interviewee who runs a sound consultancy referring to his working experiences with clients argued that aligning auditory identity along visual identity in fact is recommended by the agency rather than intended by the client.

“That is often a driver that we try and put into the client's mind. The clients tend not to come to us and say we want one channel to sound like the other channel to sound like the other to reinforce the brand, that's not a driver for the clients. It's one of the benefits one of the value statements we make about working with audio management, but we try and sell that to them rather than them come and request it from us. I don't think it's a key driver in the market at the moment.” [Sound Expert #1]

However, the interviewee stated that this linkage even though not yet relevant would develop over time:

“As clients become more sophisticated they may demand that all channels are working with the same kind of sound and feel. They may demand that, but given that it took a long time for that to happen with visuals and it's still not completely set.” [Sound Expert #1]

Based on these results one can conclude that while qualitative findings support this particular linkage in theory, business reality until now provides rather few examples of such a linkage.

4.5.1.4. Corporate Visual Identity Management

As presented in Chapter 3, this research proposes that organisations with highly developed visual identity systems are more likely to manage the auditory dimension, based on the integrated communication paradigm. Qualitative findings provide some evidence for this proposition. One interviewee commented on this linkage:

“I think if an organisation has a focus on identity and communications and has its act together in those areas, then it’ll manage its visual identity well, and is also more likely to have considered auditory identity management, so it’s a parallel thing.” [Brand Consultant #1]

The respondent continued by characterising organisations that manage their auditory identity as generally having good knowledge in communication and visual identity management.

“Those companies that have thought about auditory identity management are probably pretty savvy in terms of communications and identity management; therefore, it would be a surprise if their visual identity management wasn’t very good.” [Brand Consultant #1]

In addition, several interviewees referred to the sequential order of applying auditory and visual identity management. That is, while sharing the view of this research that companies that have a very sophisticated visual identity are more likely to apply auditory identity to a greater degree, some interviewees argue that auditory identity management will mainly be applied subsequent to visual identity. For instance, one respondent explicitly referred to the need for good visual identity system before considering the auditory topic:

“I think the visual comes first and then people with the sophistication to worry about the identity are then likely to then worry about the auditory.” [Design Manager #1]

The respondent then elaborated on this view:

“Absolutely you can’t do it without, there needs to be a level of sophistication and understanding of corporate identity and brand and

the differences before you can start to use auditory cues and auditory branding as a tool to communicate.” [Design Manager #1]

In a similar way, another interviewee considered corporate visual identity management to precede corporate auditory identity management:

“I’d just say good identity management in graphical design will almost always be present if someone is then turning their attention to good audio identity management. [...] very few companies outside of maybe a radio station are going to address their audio identity before they address their visual identity.” [Sound Expert #1]

4.5.1.5. Role of Chief Executive Officer

Identity literature regularly has linked the role of the CEO as an internal driver to corporate identity management (Balmer and Stotvig, 1997; Melewar, 2003; Melewar and Saunders, 1998; Olins, 1990). Consequently, this research considers the aspect of CEO as being a driving force as determinant factor of auditory identity management.

Qualitative findings present diverse results on this issue. While some respondents would not expect the CEO to be aware of the auditory topic at all, other interviewees are of the view that it is about individuals and most likely the CEO who would play a dominant role in auditory identity management. For instance, one interviewee did not expect the CEO to act as an internal driver for the auditory topic, arguing that CEOs rather are driven by a financial or engineering perspective:

“I would not think the CEO is a driving force in most cases. Particularly in the UK where most CEOs are financial or engineering or professional services people, so I think that’s rare.” [Brand Consultant #1]

Similarly, another interviewee who was referring to a rather strategic and monetary driven perspective of the CEO argued:

“I think a good CEO basically says if the strategy is right and the numbers work, make it happen. But it’s not, I have a personal interest

in audio, or, I have a personal passion for audio.” [Brand Consultant #5]

In contrast, several interviewees supported the view that the CEO might act as a driving force for auditory identity management. One interviewee, when referring to organisations that have applied a certain degree of auditory identity management, supported the view of a strong supporter at the top level of the organisation:

“The other thing is an organisation where there’s an individual preferably quite near the top who is either a musician or loves music very much or happens to be one of the minority of people in the world for whom sound... hearing is their primary sense. [...] I think there was probably somebody like that at British Airways a few years ago when they started to play bird song in their lounges and used the Lakmé and so forth.” [Sound Expert #2]

The interviewee continued by directly assigning an important role to the CEO:

“I think it’s far more likely that where you see sound being used well by a company it’s about one individual in that company and probably the CEO or somebody like that who’s very sensitive.” [Sound Expert #2]

One interviewee emphasised the importance of the CEO by referring to the decision power of the CEO regarding the implementation of corporate sound:

“I think it’s probably the same as with visual identity. You can imagine the CEO coming in and going, ‘I think we need a jingle, get me a jingle’.” [Brand Consultant #4]

Overall, there has been strong support for the importance of the CEO regarding auditory identity management. Again referring to the decision power of the CEO, one respondent argued:

“A bit like the visual identity because it’s such an apparent thing, if the CEO didn’t think it was right then they would stop it.” [Brand Consultant #1]

In a similar way another interviewee stated:

“Because if you haven’t got that buy in then you’ve not got anywhere - it won’t happen.” [Design Manager #1]

Finally, one interviewee stressed the importance of the CEO by arguing that although the CEO might not be greatly involved in auditory management, it is the CEO who makes the final decision.

“His role would be the person who would agree to that. He wouldn’t be the person necessarily who would do the work, it would come from probably the marketing function or maybe elsewhere, maybe from an agency into the marketing function, but at the end of the day he would have to sign that off, yeah, he would be important.” [Marketing Manager #1]

With regard to the role of the CEO, qualitative findings to a certain extent support the proposed relationship between the aspect of ‘CEO being an internal driving force’ and the degree of auditory identity management.

To sum up, most of the linkages that are proposed as antecedent factors of corporate auditory identity in this research were supported by the experts in the field. Hence, the evidence from qualitative research provides good justification for subsequent quantitative testing. The next section depicts results from the interviews regarding the proposed consequences of auditory identity management.

4.5.1.6. Consequences of Corporate Auditory Identity Management

As outlined in Chapter 3, this research builds on the similarities between visual identity and auditory identity with regard to the consequences that are expected to derive from managing each of the two dimensions. With regard to the ten conceptualised consequences of auditory identity management (Please see Chapter 3) findings from the qualitative research reveal that a majority of interviewees support the basic view that auditory identity can offer a wide range of beneficial outcomes for an organisation. Even more, most of the respondents expected to find benefits of

auditory identity that are similar or even identical to the ones linked to corporate visual identity. As one interviewee simply put it:

“I think it’s the same as for the visual identity.” [Brand Consultant #4]

In a very similar way another interviewee commented:

“It’s exactly the same list as visual identity - why would it be any different.” [Design Manager #1]

Another respondent also concisely summarised the similarity as follows:

“All the traditional views of consistency leading to trust and the ability to convey brand values through colour is the same as conveying it through music, so it’s all the same stuff.” [Sound Expert #1]

However, there were also some more differentiated comments. One respondent generally agreed to a basic similarity but was also referring to the possibility of divergences:

“Well, I think there are differences, but I think they’re more similar than different.” [Communication Consultant #1]

Another interviewee expressed the view that auditory identity would offer most of the established consequences of visual identity:

“Yes, I mean the key benefits of visual are identification, communicating what’s unique, differentiation, standout, communicating a sense of your proposition and values, and the auditory identity would share those same things. I think there is a big overlap. Absolutely, they just do it by appealing to different senses; one’s in through the eyes and the other’s in through the ears.” [Brand Consultant #1]

This view is supported by another interviewee who presents a list of joint functions of visual and auditory identity:

“But in the sense to me both the visual and auditory cues would have the same basic function which is to serve as a linking device, that is

linking the company with its various products and services, but also and maybe more important, linking all of those things with a promise - whether it's quality or reliability or the sort of company that I feel comfortable working with." [Corporate Reputation Consultant #1]

Further evidence for the similarity of consequences of corporate visual identity and corporate auditory identity has been found. One interviewee interestingly was referring to his business plan for setting up a sound consultancy that was built on the similarities between the visual and the auditory dimension:

"I built my business on an understanding that what had already been in existence in visual expression of brands didn't have an equivalent in sound. And it should be, it should be an exact parallel." [Sound Expert #1]

Finally, another respondent expressed his support about the strategic similarities of the two dimensions as follows:

"But my guess is that if you're talking at a corporate and strategic level I think the outcomes are all the same you're just using another, essentially it's another element and another medium really." [Brand Consultant #3]

Overall, the analysis of the primary data clearly shows not only strong support for similarities between consequences of visual identity and auditory identity management, but also for a general comparability of the two constructs, which is a fundamental cornerstone of this research.

In addition to the findings that are directly linked to the proposed antecedent factors and perceived consequences of auditory identity, the analysis of the interview data provides further findings regarding aspects such as type of company and industry sector which is presented in the next sections.

4.5.1.7. Type of Company

There was some evidence that auditory identity might be more relevant for business-to-consumer companies than for business-to-business companies. As one interviewee pointed out:

“So the opportunities [to apply an auditory selling medium] are less, I think, in a business to business than in a business to consumer.”
[Design Manager #1]

In a very similar way, another interviewee expressed his view as follows:

“But clearly I think that a lot of the businesses that are actually trying hardest to communicate to consumers maybe fast moving consumer goods where, I suppose there’s a constant drive to get to people on a kind of an emotional as opposed to purely rational level, so I would say that the more on the characterisation may be a very simple one, but between those which are appealing largely to the public and consumers rather than to other businesses I think you’ll find that business to business less likely to use that.” [Brand Consultant #3]

Finally, one respondent referred to the meaning of a shopping environment for consumers in relation to the implementation of auditory identity:

“So if space and environment is an important part of your business space, where your customers and, particularly, consumers go, then I can imagine there’s a high correlation of strong auditory identity.”
[Brand Consultant #1]

Linked to the aspect of business-to-consumer vs. business-to-business, interview data also provides some notion regarding the question whether auditory identity is more likely to be managed by product/manufacturing companies or service companies. As proposed by McDonald et al (2001) sound can be used to compensate the intangibility of service brands. In line with this view, qualitative findings clearly suggest that service companies are expected to utilise the auditory dimension to a greater degree in comparison to their manufacturing counterparts. As one interviewee pointed out:

“It would be more those in the service industry where they’re in charge of their environment.” [Marketing Manager #1]

This interviewee continued not only by elaborating on the view that service companies are more likely to manage auditory identity but the respondent also argued that the age of the company might be an aspect to consider:

“If you are in a new industry, you’re a service industry, you’re new to market or new to a technology, it probably could be very valuable because it’s something that really differentiates you, and that’s the key thing.” [Marketing Manager #1]

Further evidence for the predominance of service companies is provided by another respondent who based his view on the availability of auditory applications at an organisation, which is also discussed as one additional finding later in the chapter (Please see Section 4.5.1.9 on page 187):

“I can think of service, many of them are service... it’s often used in service brands where you have on-hold music or something to listen to, a chance to communicate with... where there are obvious audio touch points.” [Brand Consultant #4]

4.5.1.8. Industry Sector

Industry sector already has been discussed as one facet of this research with regard to the research setting (Please see Section 4.3.1.2 on page 161). Based on qualitative findings, this research investigates the media, information and communication industry with regard to auditory identity management. Besides qualitative findings already presented in the section about research settings, some more evidence can be presented to support the choice of this particular industry sector. For instance, one interviewee expressed the view that the IT sector predominantly has been applying auditory identity management until now:

“They’re all fairly, you know, the last 20 years, more service, IT related.” [Marketing Manager #1]

In a very similar way another interviewee explicitly referred to these particular industry segments:

“I think generally technology, telecoms those sorts of companies have gone for it in a major way.” [Brand Consultant #2]

In addition, one interviewee in particular referred to mobile phone companies as part of the media, information and communication industry that is likely to incorporate auditory communication elements:

“I suppose those where, if you like, the sound is a natural part of their communication so one can imagine that mobile phone networks and so on would be an obvious example where they’d want to utilise sound as one of the elements in the maze.” [Brand Consultant #3]

To sum up, qualitative research strongly indicates that some industry sectors are more intensively employing sound. In detail, IT and communication companies (e.g. mobile phone networks) as well as media companies (e.g., radio and television broadcasting companies) most likely have applied auditory identity management to a greater degree in comparison to other industry sectors, thus constituting the vanguard of auditory identity.

4.5.1.9. Additional Findings

In addition to the findings that are directly related to the various propositions of this research, further findings linked to auditory identity have emerged from the qualitative research that are considered by the researcher to be worth presenting.

Several interviewees have argued that the communication channels that are available to the particular company might be a relevant factor for the management of auditory identity. In other words, companies that are already communicating through channels such as TV or radio where auditory cues are a part of it are more likely to put emphasis on auditory identity management. One interviewee for instance pointed out:

“It’s almost application driven. So if you’ve got television advertising or particular radio advertising or cinema advertising, yes because people are going to be exposed to many manifestations of it.” [Brand Consultant #1]

In a very similar way, another interviewee expressed his view that it is those companies with an already higher usage of sound that seek a more sophisticated way of managing sound, hence asking for consultation on that topic:

“So demand on the client organisations is always driven by applications, by which I mean, they must be people who make radio commercials and make TV commercials, have corporate videos, have on-hold systems; there’s always a practical application for which they need sound, that they have some problems managing or they realise they’re not getting full value from, and that drives them to talk to a company that might help them create better customer experience, and manage branded properties. But it starts with the application.” [Sound Expert #1]

Besides the aspect of communication applications that are used by a company, another interviewee pointed out that the product or service the company offers can also affect the use of auditory elements:

“I think it probably comes about more often when a company has got products which involve sound or which are around sound so we’ve done quite a lot of work with mobile phone companies, because phones are all about sound and, therefore, they are much more sensitive to... they have ring tones to think of; they have mp3 downloads and playing to think of. Whereas organisations whose products don’t involve any sound at all probably are harder nuts to crack and they can ignore it for longer.” [Sound Expert #2]

Very closely linked to the idea that the usage of sound can be considered to be somehow application driven, some interviewees have expressed their view of auditory management being opportunity driven. In other words, the

opportunity to apply sound causes the utilisation of sound and hence auditory identity management. For instance one interviewee argued:

“Although I imagine among consultancies, we tend to think about that, but more when there are obvious places for sound, rather than concocting it and figuring out how to... you find people are using sound when they’ve either been cued that sound is used in that area or when the opportunity arises and it occurs them as an opportunity.”
[Brand Consultant #4]

In a very similar way, another interviewee asserted:

“[...] it’s probably more likely to be driven by opportunity identification. [...] So I think it’s more coming from the opportunity seeking rather than the evolutionary pressure from competitors.”
[Brand Consultant #5]

In essence, the notion of auditory identity management being application and opportunity driven can be interpreted as a tactical and short-term perspective towards auditory identity rather than considering auditory identity as a strategic long-term management issue. Moreover, these findings also can be linked to the above findings indicating that particular companies (e.g. mobile phone companies) and industry sectors employ sound more intensively. Linked to the view that sound management is application and opportunity driven, the degree of auditory identity management appears to be significantly higher in the media, information and communication industry where due to the nature of the industry more applications and opportunities of sound can be expected to exist. Consequently, this finding supports the decision of this research to examine the use of auditory identity management in the media, information and communication industry as already outlined in Section 4.3.1.2 on page 161 and in Section 4.5.1.8 on page 186.

In the last sections numerous findings that have been extracted from the qualitative data were presented. Overall it can be summarised that auditory identity is seen by the majority of interviewees as a potent and important ingredient of the communication tool kit and as a valid element of corporate identity management.

Moreover, supportive data for a great number of the factors that have been conceptualised to affect the management of auditory identity in an organisation (i.e. antecedents) have been found. Furthermore, auditory identity management is expected to offer beneficial outcomes similar to the consequences of the more established element of visual identity. What is more important, the definition of corporate auditory identity provided in this research is widely supported by the interviewees, which is a significant finding that supports a basic assumption of this research. In the next chapter, the development of the research instrument (i.e. questionnaire) as well as the purification of the measurement scales is presented.

4.6 Scale Development

When developing a questionnaire, which constitutes the quantitative research instrument for this research, particular attention is required regarding the development of measurement scales and issues of validity and reliability. According to DeVellis (2003:8-9) measurement scales are “*collections of items combined into a composite score, and intended to reveal levels of theoretical variables not readily observable by direct means*”. In other words, in order to measure constructs that cannot be measured directly (latent variable), ideally, scales consisting of more than one item are developed that capture the construct. DeVellis (2003:12) also stresses the pitfall of scale development and argues that “*poor measurement imposes an absolute limit on the validity of the conclusions one can reach*”. Therefore, in order to systematically develop valid and reliable measurement scales, the procedure by Churchill (1979:64) (Figure 4.1 on page 159), which offers guidance on the “*development of better measures of the variables with which marketers work*” was principally used in this research. The following key steps were undertaken and are presented in detail in the next sections:

- Specifying the domain of the constructs (literature and qualitative data)
- Generating initial item pool (literature and qualitative data)
- Questionnaire design
- Scale purification through expert judgment (i.e. content validity)

4.6.1 Specification of Construct Domain

As mentioned above, providing a precise definition of the constructs that have to be measured is crucial in order to facilitate the subsequent development of measurement scales (Churchill, 1979). The focus of this study lies on the construct of corporate auditory identity and in addition on the management of corporate auditory identity. Based on the literature review (Please see Chapter 2), which covers areas such as corporate identity, corporate image, visual identity and integrated corporate communication, the theoretical framework (Please see Figure 3.1 on page 146) as well as according hypotheses (Please see Table 3.3 on page 144) have been put forward.

Corporate auditory identity was defined in Chapter 3 as “*an assembly of auditory cues by which an audience can recognize the company and distinguish it from others*” (Bartholmé and Melewar, 2011a:95; 2011b:62). Moreover, the focal construct of corporate auditory identity management has been defined as the “*management of auditory cues by an organisation that involve creating and implementing guidelines for the use of auditory identity elements and applications*” (Bartholmé and Melewar, 2011a:96).

Owing to the fact that auditory identity management so far has not been very much in the spotlight in identity literature, qualitative research was conducted to provide further insight and to further refine and specify the domain of the focal construct. The richness of qualitative findings as presented in the last section has added to the clarification of the domain. Particularly, the strong support regarding the provided definition of auditory identity by the majority of interviewees constitutes a keystone for subsequent steps of this research. Furthermore, qualitative evidence supporting the conceptual similarity of visual identity and auditory identity (Balmer, 2001a; Fraedrich and King, 1998) has added to the clarification and specification of the domain of auditory identity, namely, to specify auditory identity as a constituent of corporate identity management and as one component of company-controlled communication (Balmer, 2001a; Bick et al, 2003; Cornelissen, 2000; Hatch and Schultz, 1997).

In contrast to corporate auditory identity, constructs that have been conceptualised in this research as antecedents and consequences of the focal construct such as corporate visual identity, market competitiveness and integrated communication, academic literature provides rather elaborated specifications of the various domains. For that reason, literature review was chosen as the main technique in order to define the domains of the non-focal constructs.

4.6.2 Item Generation

Subsequent to the definition of the constructs, the generation of an initial item pool, which reflects the second step of Churchill's (1979) procedure, was carried out. According to Clark and Watson (1995) defining the initial item pool is crucial as deficiencies in an item pool cannot be remedied by any data-analytic technique. Reviewing the literature is an important initial step in order to investigate other attempts to operationalise the same and similar constructs and to identify existing scales of the construct (Clark and Watson, 1995). In addition, literature review can help to identify problems with existing measures and indicates whether a scale is needed at all (Clark and Watson, 1995). Consequently, based on a broad literature review the majority of items have been adapted from existing scales that had demonstrated high reliability and validity in previous studies published in various marketing and management journals such as *Journal of the Academy of Marketing Science*, *International Marketing Review*, *European Journal of Marketing*, *Journal of Advertising Research* and *Journal of Marketing*. In addition, items were generated by the researcher based on qualitative data.

For measuring the antecedent constructs as well the focal construct multi-item scales were developed (Please see Table 4.5 on page 193). In contrast, constructs that are defined as consequences of auditory identity were measured by single-item scales. Using single-item scales is owed to the fact that the proposed consequences of auditory identity management in this research are not conceptualised as actual consequences but rather as perceived consequences (cf. Melewar, 2001; Melewar and Saunders, 1998; 1999; Melewar et al, 2001). In other words, based on the fact

that this research measures the perception of respondents (i.e. managers) towards auditory identity management in relation to the ten proposed consequences, using single-item scales to measure each of the consequences was considered an adequate way of operationalisation.

In total, the initial item pool comprised 96 items. The following table (Table 4.5) depicts the questionnaire section, the construct name, number of items (item pool before testing for content validity) and item sources.

Table 4.5 – Constructs, Scale Items and Item Sources

Sect.	Construct	Items	Item Sources
1	Forward Thinking	8	Van den Bosch et al (2006b), Exploratory Fieldwork
2	Organisational Innovation Adoption	13	Avlonitis et al (1994), Hurt-Joseph-Cook scale (1977), Jaworski and Kohli (1993), Pallister and Foxall (1998), Tang (1999) and Wang and Ahmed (2004), Exploratory Fieldwork
3	Market Competitiveness	7	Jaworski and Kohli (1993) and Morgan et al (2004), The Researcher
4	Differentiation Strategy	6	Lovelock (1984), Melewar and Karaosmanoglu (2006), Kotler (2002:287) and Porter (1980; 1985), The Researcher
5	Integrated Communication	7	Beard (1997), Low (2000:33) and Phelps and Johnson (1996), The Researcher
6	Corporate Visual Identity Management	18	Alessandri (2001), Alessandri and Alessandri (2004), Simões (2005) and Van den Bosch et al (2004; 2006a; 2006b), Exploratory Fieldwork
7	Corporate Auditory Identity Management	20	Alessandri (2001), Alessandri and Alessandri (2004), Simões (2005) and Van den Bosch et al (2004; 2006a), Exploratory Fieldwork
8	CEO as Driving Force	7	The Researcher
9.1	Gaining Differentiation	1	Baker and Balmer (1997), Balmer (1995; 1998), Karaosmanoglu and Melewar (2006), Melewar and Akel (2005), Melewar et al (2006), Ries and Trout (1981), Van den Bosch et al (2005) and Van Riel et al (2001)

9.2	Gaining Competitive Advantage	1	Baker and Balmer (1997), Balmer (1995; 1998), Karaosmanoglu and Melewar (2006), Melewar and Akel (2005), Melewar et al (2006), Ries and Trout (1981), Van den Bosch et al (2005) and Van Riel et al (2001)
9.3	Improving Corporate Image	1	Baker and Balmer (1997), Balmer (1998), Melewar and Karaosmanoglu (2006) and Melewar and Saunders (1999)
9.4	Supporting Corporate Communication	1	Balmer (1995; 1998), Melewar and Karaosmanoglu (2006) and Van Riel (1995)
9.5	Supporting Consistency of Corporate Communication.	1	Bernstein (1984), Bick et al (2003), Dowling (1986), Gray and Smeltzer (1985; 1987) and Van Riel (1995)
9.6	Strengthening Identification of Employees with Company	1	Baker and Balmer (1997), Olins (1989) and Dowling (1994)
9.7	Increasing Recognisability	1	Melewar et al (2006) and Van Riel et al (2001)
9.8	Increasing Familiarity	1	Melewar et al (2006) and Van Riel et al (2001)
9.9	Generating Trust	1	Melewar et al (2006) and Van Riel et al (2001)
9.10	Influencing Buying Behaviour	1	Melewar et al (2006)
Number of items		96	

4.6.2.1. Type of Measurement Indicators

An important yet often neglected aspect in scale development is the differentiation between formative and reflective indicators (Jarvis et al, 2003). So far, reflective indicators for measuring latent variables (i.e. unobservable variables) have been widely used (Christophersen and Grape, 2006; Diamantopoulos and Sigauw, 2006; Jarvis et al, 2003; MacKenzie et al, 2005). However, according to Jarvis et al (2003) deciding whether the construct that needs to be operationalised is formative or reflective in nature constitutes an initial step in every research. Jarvis et al (2003) stress that this “*requires a clear conceptual definition of the construct, generation of*

a set of measures fully representing the domain of the construct, and careful consideration of the relationships between the construct and its measures”.

The underlying reason for using either reflective or formative indicators lays in the characteristic of latent variables. Latent variables are defined as “*phenomena of theoretical interest which cannot be directly observed and have to be assessed by manifest measures which are observable*” (Diamantopoulos et al, 2008:1204). Such observable measures (i.e. indicators) can either be formative (i.e. composite latent variable model) or reflective (i.e. principal factor model) (Jarvis et al, 2003).

The key characteristic of reflective indicators is that a change (variation) in the latent variable is considered to cause variation in all observed measures (reflective indicators) simultaneously (covariation) (Diamantopoulos et al, 2008; MacKenzie et al, 2005). In other words, “*the direction of causality is from the construct to the indicators, and changes in the underlying construct are hypothesized to cause changes in the indicators*” (Jarvis et al, 2003:200). According to MacKenzie et al (2005:710) guidelines regarding reflective measurement models are “*all founded on classical test theory and its assumptions about the relationships between latent constructs and their measures*”.

In contrast to reflective indicators, observed indicators can be considered to cause a change of the latent variable, rather than vice versa. In this case the view is that the observed variables are causal (Bollen and Lennox, 1991) or formative with regard to the latent variable (Diamantopoulos and Siguaw, 2006). According to Bollen (1989:65) in the composite latent variable model (Jarvis et al, 2003), formative indicators are “*observed variables that are assumed to cause a latent variable*”, whereas for effect indicators (i.e. reflective indicators) “*the latent variable causes the observed variables*”.

Further key distinctions between reflective and formative indicators must be made with regard to their role towards the latent construct. While reflective indicators “*are essentially interchangeable (and therefore the removal of an item does not change the essential nature of the underlying construct)*” (Diamantopoulos and Winklhofer,

2001:271), with formative indicators “*omitting an indicator is omitting a part of the construct*” (Bollen and Lennox, 1991:308).

While in the case of formative indicators strategies of index construction would be indicated (Diamantopoulos and Siguaw, 2006; Diamantopoulos and Winklhofer, 2001), with reflective indicators the conventional concept of scale development is appropriate (cf. Churchill, 1979; DeVellis, 2003; Netemeyer et al, 2003). According to Diamantopoulos and Winklhofer (2001), based on a predominance of utilisation of reflective indicators in social science over last decades, so far existing guidelines almost exclusively have been developed for scale measurement rather than index construction (MacKenzie et al, 2005). Diamantopoulos and Siguaw (2006:26) stress that “*the measure development procedures associated with the two approaches are very different*”.

The choice for one of these approaches should be determined by the researcher based on the theoretical conceptualisation of the construct under investigation, in particular with regard to “*the causal priority between the indicators and the latent variable involved*” (Diamantopoulos and Winklhofer, 2001:270). In other words, the conceptualised nature and direction between constructs and measures (i.e. indicators) conceptually determines the according type of indicators (Diamantopoulos and Siguaw, 2006). In addition to various construct related conditions that determine the measurement model, Jarvis et al (2003) and MacKenzie et al (2005) in particular provide a practical set of basic questions in order to determine the appropriate measurement model. In detail, the questions relate to 1) direction of causality between the latent construct and the indicators, 2) the interchangeability of indicators (interchangeability is required for reflective but not for formative indicators), 3) the covariation among the indicators (covariation is a requirement for reflective but not for formative indicators), and 4) whether indicators have the same antecedents and consequences (expected for reflective but not for formative indicators).

The presented discussion reveals that selecting the right measurement model and indicators is a crucial prerequisite for subsequent model estimation and hypotheses testing. Depending on the theoretical conceptualisation of the construct, and thus the

nature and direction of the construct and measures, either reflective or formative indicators are the appropriate choice. Consequently, based on the presented discussion, all constructs and associated scale items of the initial item pool were re-examined by the researcher based on the guidelines provided by Jarvis et al (2003) and MacKenzie et al (2005). Based on the conceptualisation of constructs in this research, all constructs were measured by reflective indicators and consequently scale development procedures were applied (Churchill, 1979).

4.6.3 Questionnaire Design

Following the development of the individual measurement scales for each of the constructs, the scales were assembled to form an initial version of the questionnaire. Based on the constructs that were identified so far, seven-point Likert-type scales were used as the main scaling method of the questionnaire, ranging from 1 = strongly disagree, 2 = disagree, 3 = slightly disagree, 4 = neither agree nor disagree, 5 = slightly agree, 6 = agree, to 7 = strongly agree. A neutral position, namely “4 = neither agree nor disagree” was included in order to reduce uninformed responses (Hawkins and Coney, 1981) by assuring respondents not to feel compelled to commit oneself towards one direction for every questionnaire item (Wang and Ahmed, 2004).

When writing up items for the questionnaire, guidelines with regard to clarity, length, directionality, prevention of jargon, lack of ambiguity and avoidance of double-barrelled items were followed by the researcher (Clark and Watson, 1995; DeVellis, 2003; Spector, 1992). Additionally, in order to ensure a clear and attractive layout that would increase response rate, attention was given to the design of the questionnaire. In detail, consistent font style, font size and colours for the questionnaire were used (Bryman and Bell, 2007).

Referring to Churchill's (1979) procedure for scale development, measurement scales need to undergo a purification process. The purification of measurement scale is related to issues of validity and reliability and has been done in this research by employing qualitative assessment techniques. The next section presents the

qualitative assessment of the initial questionnaire (i.e. scales items) through expert judgement.

4.6.4 Scale Purification by Expert Judgement

Validity generally refers “*to the degree to which instruments truly measure the constructs which they are intended to measure*” (Peter, 1979:6). The first step in assessing validity as part of scale purification is to test for content validity by using qualitative techniques (Schlegelmilch et al, 1993).

Generally, content validity is concerned with the question whether a scale assesses the domain of interest (Hinkin, 1995) or with the “*extent to which a specific set of items reflect a content domain*” (DeVellis, 2003:49). Cronbach and Meehl (1955:282) argue that “*content validity is established by showing that the test items are a sample of a universe in which the investigator is interested*”. In addition, Churchill (1979:69) argues that “*if the sample is appropriate and the items ‘look right’, the measure is said to have face or content validity*”. In order to achieve content validity for the relevant scales of this research, the initial version of the questionnaire, which includes all relevant items, was sent to various academics via email. The academic experts were asked to review the questionnaire (i.e. scales) not only with regard to the quality of the phrasing in order to eliminate misleading wording, but more important to review scale content in order to provide recommendations to eliminate non-relevant and redundant items (DeVellis, 2003).

The questionnaire was sent to fifteen academics with expertise in areas such as marketing, communication, identity, branding or related areas. Out of the fifteen academics, ten academics provided written feedback within approximately one month. The ten academics that provided feedback were affiliated with a range of European universities and held a variety of academic positions, which ensured a widespread and rich assessment of the measurement scales. In detail, academics held positions such as PhD candidate (1), Lecturer (1), Senior Lecturer (1), Reader (1), Assistant Professor (3), Associate Professor (2) and Professor (1) and were affiliated with universities such as Middlesex University (UK), Brunel University (UK),

Erasmus University (Netherlands), Ludwig Maximilians University (Germany), Roehampton University (UK), Bahcesehir University (Turkey), University of Minho (Portugal) and University of Warwick (UK). The feedback ranged from some short remarks up to a maximum of 4 pages. All in all, the majority of academics provided very detailed recommendations and the quality of all responses was excellent.

Based on the suggestions by the experts, the wording of some items was optimised. In addition, following most of the suggestions provided by the experts 38 items in total were dropped. The following table (Table 4.6) depicts the number of items (initial item pool) for the relevant constructs before and after academic review for content validity (face validity) was conducted.

Table 4.6 – Number of Items Before and After Expert Judgement

Section	Questionnaire Section / Construct	Before	After
1	Forward Thinking	8	6
2	Organisational Innovation Adoption	13	6
3	Market Competitiveness	7	5
4	Differentiation Strategy	6	5
5	Integrated Communication	7	4
6	CVI Management	18	8
7	Corporate Auditory Identity Management	20	8
8	Chief Executive Officer as Driving Force	7	6
9.1	Gaining Differentiation	1	1
9.2	Gaining Competitive Advantage	1	1
9.3	Improving Corporate Image	1	1
9.4	Supporting Corporate Communication	1	1
9.5	Supporting Consistency of Corporate Communication	1	1
9.6	Strengthening Identification of Employees with Company	1	1
9.7	Increasing Recognisability	1	1
9.8	Increasing Familiarity	1	1
9.9	Generating Trust	1	1
9.10	Influencing Buying Behaviour	1	1
Number of items		96	58

As a result of the purification of the scales by means of expert judgement, content validity has been established for all scales that were used in the research instrument (i.e. questionnaire). In the next section each step of the data collection process, using the revised questionnaire, is described in detail.

4.7 Main Data Collection

In this section, the definition of the target population as well as various aspects of sampling such as sampling frame, sampling procedure and sample size will be addressed. Moreover, each step that was undertaken by the researcher to obtain primary data from organisations will be described in detail.

4.7.1 Target Population

Sampling in social research generally refers to the collection of information from a portion of the population of interest by taking a sample of the larger group (Baker, 1999; Churchill Jr. and Iacobucci, 2004). Churchill Jr. and Iacobucci (2004) provide a six step approach for drawing such a sample. The six steps include defining the target population, identifying the sampling frame, selecting a sampling procedure, determining the sample size, selecting the sample elements and collecting the data. Drawing on this process framework, the following sections present the various steps that have been taken in this research.

The first step is to define the population of the study. Population has been defined as “a *complete group of entities sharing some common set of characteristics*” (Zikmund, 2003:369) and as “*the universe of units from which the sample is to be selected*” (Bryman and Bell, 2007:182). The term ‘group’ in this context can refer to people, companies, nations, cities, or stores (Bryman and Bell, 2007; Zikmund, 2003). This research investigates corporate auditory identity management from a company perspective. In addition, as illustrated above one finding from qualitative research is that auditory communication mainly is expected to be employed in media, information and communication companies as well as on a more general level in

organisations that are service oriented. Drawing on this finding, this research focuses on companies from the media, information and communication industry.

In addition, in order to include the finding related to the aspect of service companies, the finance and banking industry was included as it stands for a typical service-oriented industry (Please see Section 4.3.1.2 on page 161 for a more detailed rationale for the selection of the various industries). In detail, the target population in this research is defined as consisting of companies from the United Kingdom that are assigned to the categories as summarised in Table 4.3 on page 167.

4.7.2 Sampling

Following the definition of the target population, in the next section the aspects of sampling frame, sampling procedure and sample size are discussed (Churchill Jr. and Iacobucci, 2004).

4.7.2.1. Sampling Frame

A sample has been defined as “*a subset, or some part, of a larger population*” (Zikmund, 2003:369) or as “*the segment of the population that is selected for investigation*” (Bryman and Bell, 2007:182). Accordingly, the procedure of sampling has been defined by Zikmund (2003:369) as “*using a small number of items or parts of a larger population to make conclusions about the whole population*”. Before drawing a sample from the target population, a sampling frame has to be defined from which the sample is drawn. Sampling frame has been defined as “*a list of all units or elements in a population*” (Baker, 1999:142). In other words, the sampling frame is a “*listing of all units in the population from which the sample will be selected*” (Churchill Jr. and Iacobucci, 2004:182). Moreover, according to Malhotra et al (1996:26), “*developing an appropriate sampling frame is a difficult task*”.

A variety of professional suppliers such as D&B (formerly Dun & Bradstreet), MarketingFile, LBM, Bureau van Dijk or AP Information Services, to name just a few, provide a variety of business directories and company listings. Researchers such

as Diamantopoulos and Souchon (1999), Low (2000), Melewar and Saunders (1998; 1999; 2000), Melewar et al (2001) and Morgan et al (2004) for instance have used databases provided by D&B while other researchers such as De Chernatony et al (2004) and Wang and Ahmed (2004) have used company listings based on the 'FAME' database. Moreover, most suppliers not only provide one but offer a variety of databases, such as 'D&B Marketplace of UK Businesses' (provided by D&B, 2010), 'MarketingFile B2B Email Universe' (provided by MarketingFile, 2010), 'UK Business Contact File' (provided by LBM, 2010), 'FAME' (provided by Bureau van Dijk, 2010) or 'The Marketing Manager's Yearbook' (provided by AP Information Services, 2010). Each of those databases has a different focus and includes different pieces of company information.

For this research, the decision to use the database supplied by APIS for obtaining a sampling frame is strongly based on the recommendation that was given by the Chartered Institute of Marketing (2010) (Please see page 166). According to APIS (2010) the 'The Marketing Manager's Yearbook', which has been produced by APIS for almost 20 years, is a directory of UK organisations containing "*contact details for over 50,000 key marketing and advertising decision-makers from over 10,500 major UK companies*".¹

Taking into consideration the description of The Marketing Manager's Yearbook above and bearing in mind that this research primarily aims to gather primary data from marketing, branding and communication managers, the business directory The Marketing Manager's Yearbook supplied by APIS (2010) was considered by the researcher as a legitimate source for generating a sampling frame.

The actual selection criteria for generating a sampling frame based on 'The Marketing Manager's Yearbook' database by APIS (2010) were (1) Country, (2) Industry and (3) Job Function. Firstly, as described in Section 4.3.1.1, the United Kingdom was selected as the country where this research was conducted. Secondly, industry sectors were selected as defined in Section 4.3.1.2. Thirdly, with regard to

¹ Companies were selected for inclusion in 'The Marketing Manager's Yearbook' directory on the basis that they have more than 100 employees or a marketing budget of more than £ 100,000.

the professional function of potential participants, the following job functions were selected: Advertising Director, Advertising Manager, Assistant Marketing Director, Brand Director, Brand/Product Manager, Chairman, Chief Executive, Communications Director, Communications Manager, Direct Marketing Manager, Group/Senior Brand/Product Manager, Head of Design, Head of Events, Managing Director, Marketing Assistant, Marketing Consultant, Marketing Development Manager, Marketing Director, Marketing Executive, Marketing Manager, Other Marketing Staff, PR Director, Sales Director, Web Co-ordinator. Based on the defined three criteria, the final sampling frame based on the 'The Marketing Manager's Yearbook' supplied by APIS (2010) consisted of 2,719 individual contacts from 1,354 companies.

Similar to other research projects in marketing, there is a limitation in the sampling frame in this research. Referring to the problem of non-coverage error, which is one type of non-sampling error, it has to be taken into account that the sampling frame does not include some elements of the target population (Bryman and Bell, 2007; Churchill Jr. and Iacobucci, 2004). The following three aspects refer to the problem of non-coverage error.

Firstly, companies with a diverse spectrum of products or services might be assigned to different categories depending on the industry classification (UK SIC 2003, UK SIC 2007, APIS). As a result, companies that would have been assigned to a particular industry based on UK SIC 2007 for instance, might be assigned to a different category when applying UK SIC 2003 or APIS industry classification. Consequently, even though a company might be part of the target population as defined in this research, based on the APIS industry classification this company might have been omitted.

Secondly, the business directory supplied by APIS did not include companies with less than 100 employees or a marketing budget of less than £ 100,000. That means that even though a company could have been assigned to one of the selected industry categories and therefore should be included in the sampling frame, in fact it was omitted by APIS based on the above criteria.

Thirdly, a problem with all business directories offered by professional suppliers such as D&B, Marketing File, LBM and APIS is that they are managed, updated and published by a commercial organisation rather than by a governmental body, which makes it more likely that such directories do not provide a complete list of all UK companies.

To sum up, owing to the different industry classifications, the two restrictions applied by APIS and the lack of governmental certification, it has to be concluded that the sampling frame does not perfectly reflect the target population (Bryman and Bell, 2007). Churchill Jr. and Iacobucci (2004:324) point out that this is a somewhat frequent dilemma in social science research, arguing that “[...] *there is rarely a perfect correspondence between the sampling frame and the target population of interest*”.

Nevertheless, despite the identified limitation of the sampling frame, the researcher decided to consider the overlap between the target population (i.e. UK companies from selected industries) and the sampling frame (i.e. commercial database) to be acceptable for the succeeding data collection. The next section outlines the sampling procedure that has been applied in this research based on the defined sampling frame.

4.7.2.2. *Sampling Procedure*

There are two key sampling methods, namely probability and non-probability sampling (Baker, 1999; Bryman and Bell, 2007; Churchill Jr. and Iacobucci, 2004). While with probability sampling, “*each population element has a known, nonzero chance of being included in the sample*”, when using non-probability sampling, “*there is no way of estimating the probability that any population element will be included in the sample*” (Churchill Jr. and Iacobucci, 2004:324). In other words, when using probability sampling the probability of each of the units in the population being selected is known, which more likely leads to a representative outcome since it keeps sampling error to a minimum (Bryman and Bell, 2007). In contrast, with non-probability sampling the probability of each of the units in the population being

selected is not known and there is a higher chance for some units of the population to be in the sample than for others (Bryman and Bell, 2007; Kane and O'Reilly-de Brún, 2001). Non-probability sampling methods for instance include convenience sampling, judgemental sampling and quota sampling (Baker, 1999). Probability sampling methods include for instance simple random sampling, systematic sampling, stratified random sampling or cluster sampling (Bryman and Bell, 2007).

For this research, the researcher decided to get in touch with all 2,719 individual contacts that were listed in the sampling frame. The potential respondents were contacted either by mail, email or telephone (A detailed description of the data collection procedure is presented in Section 4.7.3 on page 207). Referring to the definitions provided in the literature, probability sampling generally is defined as a sampling technique where every element has a known, nonzero chance of being included into the sample (Bryman and Bell, 2007; Churchill Jr. and Iacobucci, 2004). By selecting all units of the sample frame to be included in the sample, the probability for each unit to be included was nonzero and known. Consequently, even though the issue of non-coverage error as discussed above is a limitation, the technique of probability sampling was employed for drawing a sample from the sampling frame.¹

4.7.2.3. *Sample Size*

The issue of sample size has been widely discussed in academic literature, but so far the question about what can be considered to be a large enough sample size in order to perform different statistical techniques has not been fully resolved (Hair et al, 2007). However, sample size and statistical technique are strongly affected by each other. Depending on the statistical technique that is going to be employed such as Multiple Regression Analysis (MRA), Confirmatory Factor Analysis (CFA) and Structural Equation Modelling (SEM) a minimum sample size is required. Vice versa, as Reynolds et al (2003:87) pointed out, the particular size of an available sample strongly determines “*the analytical techniques that can be used*”.

¹ Since all units of the sampling frame have been selected neither simple random sampling nor systematic sampling was required to be performed (Bryman and Bell, 2007).

A review of the literature provides a variety of suggestions on this issue. For instance, according to Hair et al (2007), a sample size of minimum 200 is a good basis to perform a maximum-likelihood based estimation, which is one of the most common Structural Equation Modelling (SEM) estimations (Hair et al, 2007). Bollen (1989) recommends a ratio of five samples (i.e. observations) per variable. According to Netemeyer et al (2003) a minimal Confirmatory Factor Analysis (CFA) requirement is that the sample size should be greater than the number of covariances in the data matrix. Other researchers such as Jöreskog and Sörbom (1996) suggest that the sample size should be at least ten observations per parameter estimated to perform CFA. Floyd and Widaman (1995) recommend that having five to ten samples per variable is adequate when performing CFA.

For this research, the data collection process was not straightforward (Please see Section 4.7.3 on page 207) and as a result, a rather small sample size was available for subsequent analysis. Small sample sizes do not have to have any negative effect on the representativeness of the sample. As Melewar and Saunders (1998:299; 1999:589) and Melewar et al (2000:197) pointed out, “*small numbers do not make a sample non-representative, particularly when they represent much of the population*”. However, the restriction of a small sample size consequently led to the two following decisions.

Firstly, instead of using a Covariance Based Structural Equation Modelling (CB-SEM) approach, frequently linked to software packages such as LISREL or AMOS, the researcher decided to employ Partial Least Squares based Structural Equation Modelling (PLS-SEM), due to the fact that PLS-SEM generally can be performed with smaller sample sizes (Fornell and Bookstein, 1982; Hsu et al, 2006) (Please see Chapter 5 for more details).

Secondly, according to Reynolds et al (1994:295) “*skipping the pre-test is acceptable only when it could adversely affect the final experiment or study (for example, if the sample size is so small that pretesting invalidates the final sample)*”. Based on this rationale, the researcher decided to forgo conducting a pilot study but

to use all samples as part of the main data analysis since using some samples for a pre-test (i.e. pilot study) would have further reduced the number of samples available of the main analysis and consequently would have jeopardised the main study.

4.7.3 Data Collection Procedure

After the questionnaire was tested for content validity and according changes were made (Please see Section 4.6.4 on page 198), the research instrument was used to collect the main data. The following sections outline the various steps that were followed in chronological order.

4.7.3.1. Stage 1 – Printed Letter and Questionnaire

In a first stage, a sample of 250 individuals from the sampling frame as defined earlier in this chapter was contacted. In detail, an individually addressed and colour-printed cover letter was sent out, briefly explaining the background and purpose of the survey as well as giving instructions on how to fill in and to return the questionnaire. Furthermore, a confidentiality guarantee was given in the cover letter (Please see Appendix 4 on page 358). In addition, a colour-printed version of the questionnaire comprising five A4 pages (three sheets) was included (Please see Appendix 5 on page 359). In order to increase the willingness to participate, a prepaid envelope to return the questionnaire free of charge was included. Furthermore, respondents were offered a summary of the research results as an incentive and compensation for their contribution. A box to tick if a summary was wished was included at the end of the questionnaire (Diamantopoulos and Winklhofer, 2001).

After around four weeks only six questionnaires had arrived back at the researcher. Consequently, in order to identify possible deficiencies in the data collection process, the researcher intensively reviewed all documents (i.e. cover letter, questionnaire, envelope) as well as the sending process. While all documents were found to be acceptable, the returning process offered some reason for concern. That is, in order to guarantee a professional return service, the researcher had employed a professional

service company.¹ This service included the supply of a UK address (which was printed on the pre-paid return envelope) to which all completed questionnaires should be returned and then collectively send back to the researcher on a weekly basis.²

Unfortunately, this process turned out not to work properly. In order to check for a correct sending process the researcher had included a control address to which four complete sets of documents were sent. Despite the fact that the pre-paid envelopes were sent back to the researcher (personally confirmed by the test person), the four envelopes never arrived at the researcher. Based on this finding, the reviewer decided to terminate this way of data collection and to change the data collection from a printed to a digital method. The following section describes the modified data collection process employed in ‘Stage 2’.

4.7.3.2. Stage 2 – Email and Web-based Questionnaire

Based on the fact that the cover letter and questionnaire did not give any reason for concern, the researcher transferred the printed version of the questionnaire into a web-based version (Please see Appendix 7 on page 365).³ A website was set up presenting all relevant information on the start screen similar to the cover letter. This start screen also provided a link to start the questionnaire. The online version of the questionnaire was split into six screens. At the end of the questionnaire respondents were invited to indicate if they would like to receive a free summary of the research findings.

In contrast to email questionnaires where the questionnaire is sent vial email, for web surveys respondents are directed to a website where they can fill in the survey

¹ For the return sending process, the ‘Deutsche Post - Direkt Marketing Center’ was hired.

² The key rationale for setting up a specific UK address was to avoid any loss of returned questionnaires within the rather complex University mail delivery system.

³ In an attempt to increase the response rate for the web-based questionnaire, the length of questionnaire was reduced. In detail, several items of the original printed questionnaire were dropped (1.3, 1.6, 2.6, 3.4, 4.3, 6.5, 6.6, 6.7, 7.1, 7.2, 7.3, 7.4, 7.5, 8.3, 8.5, 8.6, 9.1, 9.2, 9.3, 9.4, 10.4, 11.2, 11.5, 11.7, 12.5) based on the researcher’s judgement. The refined version of the questionnaire was used in Stage 2 and Stage 3.

(Bryman, 2004). According to Bryman (2004) web-based questionnaires are recommended over email questionnaires. Yun and Trumbo (2000) argue that electronic surveys are advisable “*when resources are limited and the target population suits an electronic survey*”. Since this research aims to collect primary data from corporations (i.e. managers) using an electronic way of data collection was considered to be appropriate.

The following list summarises some of the key advantages of web-based surveys. Web-based surveys generate lower costs in comparison to postal survey, provide faster response and a higher response rate (Cobanoglu et al, 2001), are unrestricted in terms of geographical aspects, generate fewer unanswered question and therefore fewer missing data, offer a more attractive format with the use of colours, provide automatic determination based on filter questions (Bryman, 2004; Bryman and Bell, 2007). Moreover, as the data of the questionnaire directly is stored into a database, which can be directly imported into statistical software such as SPSS, coding errors are eliminated (Bryman, 2004; Bryman and Bell, 2007). In addition, in the case of web-based surveys the issue of confidentiality and anonymity is less problematic in comparison to surveys via email (Bryman, 2004). Nevertheless, some disadvantages of web-based surveys such as sampling that is restricted to online populations and possible misuse in terms of multiple replies also need to be taken into consideration (Bryman and Bell, 2007). However, the researcher concluded that the advantages of a web-based survey outreach the possible disadvantages, which has led to the decision to consider a web-based survey as an appropriate way for gathering primary data.

In addition to the website, an email was prepared that included the key facts of the research, similar to the cover letter (Please see Appendix 6 on page 364). The email also provided a link that directed the respondent to the survey website. After the website and the email were set up and extensively tested, an email was sent to those 772 contacts that were listed in the sampling frame with a personal email address.

After around four weeks there were eleven entries in the database. Since the survey was entirely anonymous and no tracking system was in place, the researcher was not

able to send a reminder email without contacting some of those people that already had taken part in the survey, which can be "*frustrating for the already cooperative respondent*" (Churchill Jr. and Iacobucci, 2004:386). Based on the low response rate, the researcher decided that this way of data collection was not going to provide enough data in an acceptable time period as well as with regard to the contacts that were available in the sampling frame. After some consultation with academics (mainly at the Academy of Marketing Conference 2010 in Coventry, UK), the researcher decided to change the way of contacting possible respondents. Following some suggestions from senior academics, the researcher decided to contact possible respondents via telephone rather than by email. However, while changing the way of approaching possible respondents, the collection of the data by using a web-based questionnaire was unchanged. The next section outlines 'Stage 3' of the data collection process.

4.7.3.3. Stage 3 – Telephone and Web-based Questionnaire

Strongly based on the suggestions from several senior researchers as outlined above, in a third stage the remaining 1,697 contacts were contacted by telephone.¹ The researcher started by personally calling 135 contacts. For all calls a telephone script was used that was developed by the researcher. The telephone script generally reflected the content and structure of the letter from 'Stage 1' and the email from 'Stage 2'. In detail, the script included a personal introduction, a brief summary of the research topic, the actual request of completing the questionnaire as well as the benefits for the participant. Even though the script was used as a basic guideline, obviously since each conversation with an individual is different, the researcher also had to adjust the conversation ad-hoc based on the specific requirements and concerns of each respondent.

Out of the 135 calls that were made, 33 respondents either agreed to participate in the survey or at least considered to take part. Immediately after each call with an affirmative outcome an email was sent out to an individual email address referring to

¹ Total sampling frame 2.719 contacts, Post: 250 contacts, Email: 772 contacts, Telephone: 1.697 contacts.

the phone call and including a direct link to the online questionnaire. Despite a positive response, owing to the large number of remaining contacts that needed to be contacted and in order to manage the calls within an acceptable time period the researcher decided to hire a professional call centre to support the data collection.¹ In order to ensure that the calls made by the call centre did not differ significantly from the calls made by the researcher, the telephone script used by the researcher was used by the call centre with only minor amendments. Moreover, when briefing the call centre on how to conduct the phone calls, the experience gained by the researcher when making the first 135 phone calls proved to be very helpful as it revealed to the researcher how to best introduce the research topic over the phone and how managers reacted regarding the research topic and the request to participate. Overall, based on the personal experience by the researcher, the detailed briefing of the call centre and the telephone script that was provided to the call centre, the researcher considered that contacting possible respondents through a call centre was acceptable.

In total, the call centre called 1,562 contacts. For each contact that was listed in the sampling frame up to three attempts to get in touch with the contact were made. The call centre company then produced an Excel spreadsheet that listed the results of the calls for each contact. Besides the cases where respondents did not want to participate or were not available, the following two key categories were listed. Firstly, all contacts that had clearly agreed on the phone to take part in the research were marked as 'Yes'. The second category, labelled as 'Maybe', included those cases where there was a chance that the respondent might participate in the survey. For instance, some respondents were not able to promise on the phone to take part because of time constraints but agreed to have a look. In some other cases a colleague agreed to take part or would pass the request on to an appropriate colleague. In total, 212 respondents in the 'Yes' and 139 respondents in the 'Maybe' category were obtained. Next, each respondent marked as 'Yes' or 'Maybe' was personally contacted by the researcher via email. In the email the researcher thanked the respondent for the willingness to contribute and for the willingness to consider taking part, respectively, and a direct link to the website was included.

¹ The call centre that was hired is Granby Marketing Services Ltd.

Like for the second stage of data collection, all completed questionnaires obtained in this stage were saved in the main database. Consequently it was not possible to assign completed questionnaires to the individual stages, thus it was not possible to calculate the response rate for this particular phase of data collection. Also, similar to the second stage, due to ensuring total confidentiality and hence the absence of any tracking system, the researcher was not able to send any reminder emails or make reminder phone calls.

Overall, 2,719 possible respondents were contacted during the three stages of data collection and a total of 84 completed surveys were saved in the database which equals a response rate of 3.1%.

However, in order to calculate an accurate response rate, aspects of ineligible cases and undeliverable sent-outs need to be taken into account (cf. The American Association for Public Opinion Research, 2011). In this research the category 'No Contact' is used in order to address this aspect. In detail, in 'Stage 1' 21 printed letters were returned to the researcher marked by Royal Mail as "Address has gone". In 'Stage 2' 48 emails were returned to the researcher due to "Mail Delivery Error", which indicates an incorrect email address. Finally, in 'Stage 3' a total of 593 individuals that were listed in the sampling frame have not been contacted because the individual no longer works for the company or was not available after the 3rd attempt by phone. In total, during the three stages of data collection 662 cases were classified as 'No Contact'. Subtracting those 662 cases from the total number of samples of 2,719 results in a total number of contacted individuals of 2,057. Based on a total of 84 returned questionnaires (complete and partial) this equals a response rate of 4.1%. The following table (Table 4.7 on page 213) summaries the results of each of the three stages of the data collection process.

Table 4.7 – Methods and Results of Data Collection

Stage	Method of Data Collection	Distributed	No Contact	Contacted	Returned	RR ⁵
1	Printed Letter + Printed Questionnaire	250	21 ¹	229	6	2.62%
2	Email + Web-based Questionnaire	772	48 ²	724		
3.1	Telephone (Researcher) + Web-based Questionnaire	135	38 ³	97	78 ⁴	4.27%
3.2	Telephone (Call Centre) + Web-based Questionnaire	1,562	555 ³	1,007		
Total		2,719	662	2,057	84	4.08%

¹ ‘No Contact’ in Stage 1 refers to returned letters marked by Royal Mail as “Address has gone”.

² ‘No Contact’ in Stage 2 refers to returned emails due to “Mail Delivery Errors”.

³ ‘No Contact’ in Stage 3.1 and Stage 3.2 refers to individuals that were not available after the 3rd attempt and individuals that had left the company.

⁴ Even though 11 responses can be assigned to ‘Stage 2’, subsequent database entries might also have derived from ‘Stage 2’ rather than from ‘Stage 3’. Consequently, it is not possible to definitely determine the number of samples obtained in ‘Stage 2’ and ‘Stage 3’.

⁵ RR = Response Rate. According to AAPOR (The American Association for Public Opinion Research, 2011:46) this category is labelled as “Corporation Rate 2 (COOP2)”.

Looking at other response rates such as those published by the Direct Marketing Association in the US (The Direct Marketing Association; 2010a), which is “*the leading global trade association of businesses and non-profit organizations using and supporting multichannel direct marketing tools and techniques*”, offers some orientation with regard to the particular response rates in this study. Obviously it has to be taken into account that while the data collection in this research is associated with an academic project, the response rates presented in the ‘DMA 2010 Response Rate Report’ (The Direct Marketing Association, 2010a) relate to commercial data collection, which clearly is a limitation in terms of the comparability of the different response rates. Nevertheless, the following two figures of the ‘DMA 2010 Response Rate Report’ (The Direct Marketing Association, 2010a) are somewhat comparable with ‘Stage 1’ and ‘Stage 3’ of the data collection process in this research and thus provide a meaningful orientation. Firstly, for B-to-B direct mailings for prospect lists a response rate of 1.12% has been recorded (The Direct Marketing Association, 2010a). Secondly, for B-to-B outbound telephone prospect calling a response rate of

5.48% has been recorded (The Direct Marketing Association, 2010a). The following table (Table 4.8) shows some key response rates of the ‘DMA 2010 Response Rate Report’ (The Direct Marketing Association, 2010a).

Table 4.8 – Response Rates Published by Direct Marketing Association

Direct Mail (Overall)	
Response rate for a letter-sized direct mail piece for a house list	3.42%
Response rate for a letter-sized direct mail piece for a prospect list	1.38%
Direct Mail (B-to-B)	
Response rate for a letter-sized direct mail piece for a house list	3.03%
Response rate for a letter-sized direct mail piece for a prospect list	1.12%
Outbound Telephone (Overall)	
Response rate for prospect calling	6.16%
Outbound Telephone (B-to-B)	
Response rate for prospect calling	5.48%

Source: Direct Marketing Association (2010a)

In addition to the ‘DMA 2010 Response Rate Report’ published by the Direct Marketing Association in the US (2010a), some further data on email response rates is available from the Direct Marketing Association in the UK. This data is to some extent comparable with ‘Stage 2’ (i.e. contact by email) of the data collection process in this research, thus offering some guidance.

According to the ‘Email Benchmarking Report Half 2 2010’ (The Direct Marketing Association, 2010b:15), the average unique open rates for acquisition emails (not retention emails) in Q3 2010 was 12%, declining to 11% for Q4 2010.¹ In other words, only around 11% of the delivered emails actually are opened by the receiver. More important, the report also states an average unique click through rate (CTR) for acquisition emails in Q3 and Q4 2010 of 3% (The Direct Marketing Association,

¹ Average unique open rate is defined as “the percentage of unique confirmed opens divided by the total number of accepted emails” (DMA/Email Experience Council, 2010:2).

2010b:15).¹ This figure indicates a very limited willingness to take action by the recipient as a direct result of receiving the email.

Despite the limitation regarding the comparability of the presented reports with this research as discussed above, the response rates recorded by the US Direct Marketing Association (2010a) as well as the UK Direct Marketing Association (2010b) generally suggest that the response rates achieved in this research are reasonable.

Nevertheless, when reviewing possible reasons for low response rates, Kinnear and Taylor (1991) and Churchill and Iacobucci (2004) provide a possible explanation, namely that the respondent's personal interest in the research topic strongly determines the willingness to participate, thus affecting the overall response rate. Similarly, Armstrong and Overton (1977:397) support this view when presenting the concept of 'Interest Hypothesis' that "*involves the assumption that people who are more interested in the subject of a questionnaire respond more readily*".

So far, due to the newness of auditory identity, many managers have widely ignored the auditory dimension. One respondent [brand consultant #3] who was interviewed during the qualitative research phase in particular referred to a general absence of the auditory topic at a corporate level: "*I pretty well believe that actually a lot of corporations aren't really ready on this stuff. So that their thinking is basic and probably immature, we're talking about a fairly immature market here really.*" Building on the 'Interest Hypotheses' (Armstrong and Overton, 1977; Churchill Jr. and Iacobucci, 2004; Kinnear and Taylor, 1991) and bearing in mind the general newness of auditory identity for many managers, this might offer a reasonable rationale for the limited response rate in this research.

¹ Average unique click through rate (CTR) is defined as "*the number of times a link is clicked from a message divided by the number of accepted messages*" (DMA/Email Experience Council, 2010:2).

4.7.4 Non-Response Bias

In addition to the issue of non-coverage error as discussed above (Please see Section 4.7.2.1 on page 201), the issue of non-response errors, which is another type of non-sampling error within the category of non-observation errors, needs to be addressed.

Non-response errors basically represent “*a failure to obtain information from the sample*” (Churchill Jr. and Iacobucci, 2004:381), for instance because respondents cannot be contacted or they refuse to take part in the survey. The actual problem of non-response errors derives from the question whether “*persons who respond differ substantially from those who do not*” (Armstrong and Overton, 1977:396). If non-response bias occurs, “*results do not directly allow one to say how the entire sample would have responded*” (Armstrong and Overton, 1977:396). Consequently, non-response bias can limit the generalizability of the sample to the population.

In order to address the problem of non-response bias, Wilcox et al (1994:51) refer to two main paths that researchers can follow, namely “*the development of procedures to reduce or avoid the error altogether and the development of procedures to estimate the amount of error in the final survey results*”. Similarly, Churchill and Iacobucci (2004) refer to three general strategies, namely to increase the initial response rate, to reduce the impact of refusal through follow-up, and to extrapolate the collected data. Accordingly, researchers can follow various specific procedures in order to address the issue of non-response bias.

For instance, Diamantopoulos and Sigauw (2006) refer to the option of contacting non-respondents to ask for their reasons not to participate. Another option is to contact non-respondents in order to get data for some key constructs with the aim of conducting a comparison of non-respondents with respondent (Bhattacharya et al, 1995; Wilcox et al, 1994).

Another method of estimating potential differences between non-respondents and respondents is to compare key characteristics, for example key demographics such as age, income and gender of the survey respondents with the population from which

the sample is drawn (Bhattacharya et al, 1995) or of the respondents with the overall sample (Elsbach and Bhattacharya, 2001).

Finally, based on the simple assumption that “*subjects who respond less readily are more like no respondents*” (Armstrong and Overton, 1977:397), the comparison of early and late respondents has been extensively adopted by researchers as a way of determining potential non-response bias (e.g. Beard, 1997; Diamantopoulos and Siguaw, 2006; Diamantopoulos and Souchon, 1999; Diamantopoulos and Winklhofer, 2001; Low, 2000; Malhotra et al, 1996; Morgan et al, 2004; Peck and Wiggins, 2006; Sin et al, 2005; Wang and Ahmed, 2004; Zeithaml et al, 1985). When applying this “*extrapolation method*” (Armstrong and Overton, 1977:397) statistical comparisons of factors such as demographics or scales of independent and dependent variables are performed (Churchill Jr. and Iacobucci, 2004; Peck and Wiggins, 2006; Sin et al, 2005), indicating potential non-response bias in the data set.

For this research, the options of addressing non-response bias as described above were limited. Due to the fact that absolute confidentiality was promised to all respondents and thus no tracking system was in place, the researcher was not able to identify non-respondents from any of the three stages. Thus, the researcher was not able to collect any additional data from non-respondents in order to perform any procedures of comparison (Foreman and Whetten, 2002).

Moreover, with regard to the procedure of comparing demographics such as age, income and gender between respondents and the population from which the sample was drawn, the sampling frame that was available did not contain any demographic data (except gender that could have been identified based on the salutation Mr/Ms given in the directory).

Furthermore, the option of comparing early and late respondents also was not available to the researcher. Due to the fact that all completed web-based questionnaires were stored in one single database, it was not possible to identify whether an entry was a result of ‘Stage 2’ (i.e. contact by email) or of the following ‘Stage 3’ (i.e. contact by telephone). In other words, since database entries could not

be associated with a particular date of contact of either ‘Stage 2’ or ‘Stage 3’, it was impossible to separate early and late respondents.¹

Nevertheless, it has to be mentioned that for the first stage of data collection by letter (i.e. ‘Stage 1’), the procedure of comparing early and late respondents theoretically would have been possible. However, with only six returned questionnaires, performing statistical calculation was considered by the researcher to provide little significance.

In addition, for ‘Stage 3’ (i.e. contact by telephone) refusals that are a specific type of non-respondents could have been identified during the personal conversation on the phone. According to literature, contacting non-respondents to either ask for their reason not to participate or to get some data for key constructs is an option to address non-response bias (Bhattacharya et al, 1995; Diamantopoulos and Siguaw, 2006; Wilcox et al, 1994). However, since those individuals personally have expressed their refusal to take part in the survey, the researcher decided that contacting non-respondents again in order to obtain more information would not comply with research ethics regulations.

Moreover, data collection in this research consists of three stages due to unsatisfying response rates mainly for the first two stages. In detail, in a first stage respondents were contacted through printed letters and questionnaires (Group 1: Print). This was followed by data collection through email and a web-based questionnaire (Group 2: Email). Finally, respondents were invited personally via telephone to fill in the web-based questionnaire (Group 3: Telephone) (Please see Section 4.7.3 on page 207 for a more detailed illustration of the data collection procedure). In order to identify any differences between the three groups derived during data collection (i.e. print, email,

¹ For instance, two database entries at the same day could come from a contact by email from ‘Stage 2’ and a phone call from ‘Stage 3’. In this case one entry would be an early respondent while the other entry would be a late respondent. However, it could also be the case that both database entries at the same day come from ‘Stage 2’ or from ‘Stage 3’, thus making both of them either early respondents or late respondents, respectively.

telephone), the following parametric as well as non-parametric tests have been performed.

Firstly, a one-way between-groups analysis of variance (ANOVA) was performed on all three stages/groups of the data collection. Even though data in this research showed some tendency for violation of the assumption of normal distribution (See Section 5.3.3 on page 238), which can affect an ANOVA particularly in the case of unequal sample sizes (Field, 2009), since ANOVA is accompanied by the non-parametric Kruskal-Wallis test (see below), performing an ANOVA still was considered by the researcher to be helpful in forming a richer and more accurate picture.

Results of the ANOVA show that for the large majority of variables no significant differences between the three groups were found. Nevertheless, for the following three variables statically significant differences (significance level $p < 0.05$) were found: IMGDIFF1: ($F(2, 81) = 4.089, p = 0.020$), CEODRF2: ($F(2, 81) = 9.236, p = 0.000$) and CEODRF3: ($F(2, 81) = 3.958, p = 0.023$).

Subsequently, in order to further identify the specific differences between the three sample groups, a post-hoc comparison using Hochberg's GT2 test was performed. This test is recommended over other post-hoc tests such as Tukey's HSD test when sample sizes are very different which is the case in this research (Field, 2009).

Results show that for the variable IMGDIFF1 there was a statistically significant difference (significance level $p < 0.05$) between group 1 (print) and group 2 (email) ($p = 0.036$) as well as between group 2 (email) and group 3 (telephone) ($p = 0.027$) while there was no difference between group 1 (print) and group 3 (telephone) ($p = 0.807$). For the variable CEODRF2 there was a statistically significant difference between group 1 (print) and group 2 (email) ($p = 0.009$) and group 1 (print) and group 3 (telephone) ($p = 0.000$) but not between group 2 (email) and group 3 (telephone) ($p = 0.998$). For the variable CEODRF3 there was a statistically significant difference between group 1 (print) and group 3 (telephone) ($p = 0.019$).

but not between group 1 (print) and group 2 (email) ($p = 0.280$) and not between group 2 (email) and group 3 (telephone) ($p = 0.922$).

Based on the fact that some tendency for a violation of the assumption of normal distribution was identified in this research (See Section 5.3.3 on page 238) the Kruskal-Wallis test was performed in addition to an ANOVA. The Kruskal-Wallis test not only is appropriate in cases of non-normally distributed data but more important in the case of unequal sample sizes (Field, 2009). Results from the Kruskal-Wallis test show a statistically significant difference (significance level $p < 0.05$) for three variables, namely MKTCOMP4 ($H(2) = 5.961, p = 0.046$), CEODRF2 ($H(2) = 13.411, p = 0.000$) and CEODRF3 ($H(2) = 6.513, p = 0.031$).

Next, a post-hoc comparison using Mann-Whitney U test was performed in order to identify the specific differences between the three sample groups. Since with three groups only three tests need to be performed the researcher decided not to - Revised apply a Bonferroni correction to address the possible Type I error inflation (Field, 2009).

Results from the Mann-Whitney U test show that for the variable MKTCOMP4 there was a statistically significant difference (significance level $p < 0.05$) between group 1 (print) and group 2 (email) ($p = 0.037$) and between group 2 (email) and group 3 (telephone) ($p = 0.029$). For the variable CEODRF2 there was a statistically significant difference between group 1 (print) and group 2 (email) ($p = 0.006$) and between group 1 (print) and group 3 (telephone) ($p = 0.000$). Finally, for the variable CEODRF3 there was a statistically significant difference between group 1 (print) and group 3 (telephone) ($p = 0.008$).

In conclusion, only a limited number of statistically significant differences between the three sample groups (i.e. stages of data collection) has been found. Particularly, when taking into consideration the total number of 46 metric variables in this research, the identified differences do not indicate a major problem. However, with unequal sample sizes between group 1 and 2 and group 3 statistical comparisons do include some limitation.

4.7.5 Research Ethics

Research ethics is a fundamental aspect when conducting any research project, particularly if human beings are involved as it is the case in this research. In order to meet all standards of research ethics as defined by Brunel University, approval was sought by the researcher from the Research Ethics Committee of Brunel University for both the qualitative (i.e. interviews) as well as for the quantitative (i.e. questionnaire) data collection phase.

Moreover, each interviewee of the first qualitative research phase was informed that the participation is strictly voluntary, that neither the respondents nor the companies can be identified and no personal names will be disclosed, that all data will be reported in an aggregated form and will be used for statistical purposes only, and that the interview guidelines have been approved by the Brunel Business School Research Ethics Committee. In addition, each interviewee was asked to sign a participant consent letter before the interview, which clearly listed the above-mentioned ethical aspects.

Similarly, for the quantitative research phase, respondents were informed in a cover letter for 'Stage 1' (i.e. printed questionnaire) and on a cover screen preceding the web-based questionnaire for 'Stage 2' and 'Stage 3' (i.e. web-based questionnaire) that the participation is strictly voluntary, that neither the respondents nor the companies can be identified and no personal names will be disclosed, that all data will be reported in an aggregated form and will be used for statistical purposes only, and that the questionnaire has been approved by the Brunel Business School Research Ethics Committee. In addition, details about the objective and purpose of the research as well as the process on how to fill in the questionnaire were given to the respondents before the collection of quantitative data.

4.8 Data Analysis Techniques

The following sections briefly summarise key steps that were followed in order to analyse the quantitative data. A more detailed description of each statistical technique for each stage is provided in Chapter 5.

The analysis of quantitative data was completed in three main stages. The first stage commenced by the examination of sample characteristics to provide a basic overview of the sample. Next, descriptive statistics were produced with the IBM SPSS 19 software package. In detail, data was investigated for missing values, which was followed by the examination of univariate outliers by inspecting frequency tables and boxplots as well as multivariate outliers through the examination of Mahalanobis D^2 values. Next, mean values and standard deviations were calculated which was followed by inspecting normal Q-Q plots, calculating skewness and kurtosis values and applying the Kolmogorov-Smirnov and Shapiro-Wilks Test in order to assess the data in terms of univariate normality. Furthermore, data was tested for homoscedasticity by inspecting scatterplots as well as applying the Levene test. Finally, data was examined regarding multicollinearity by examining the correlation matrix as well as VIF and Tolerance values.

The second main stage of the data analysis involved scale simplification that includes testing for scale reliability and inspecting factor structures using Exploratory Factor Analysis (EFA). For testing scale reliability, Cronbach alpha coefficients as well as item-total correlations were used as main criteria. Subsequently, exploratory factor analysis (EFA) was performed using principal component analysis method and varimax rotation. The exploratory factor analysis (EFA) was conducted on three separate groups of constructs owing to sample size restrictions. Firstly, assumptions of exploratory factor analysis (EFA) were tested by the inspection and assessment of numerous criteria such as the correlation matrix (R matrix), the determinant of the correlation matrix, Kaiser-Meyer-Olkin measure of sampling adequacy (KMO), KMO values for individual items and Bartlett's Test of Sphericity (BTS). Next, in order to identify the factor structure suggested by EFA, criteria such as latent roots (eigenvalues), scree plots, factor loadings, cross-loadings and communalities were

examined. Depending on the results of EFA, items were dropped and exploratory factor analysis (EFA) was performed again. In a final step of exploratory factor analysis (EFA) scale measurements of the final version of the suggested factor structure were assessed in terms of reliability by examining Cronbach coefficient alpha and item-total correlations.

The third stage of data analysis included the assessment of the measurement model and structural model. Mainly owing to the limited sample size and some violation of the assumptions of normal distribution in this research, Partial Least Squares Structural Equation Modelling (PLS-SEM) was applied in favour of Covariance Based Structural Equation Modelling (CB-SEM). PLS-SEM was performed using the SmartPLS 2.0 software package. In a first step, similar to more traditional CB-SEM, when conducting PLS-SEM the reliability and construct validity (i.e. convergent and discriminant validity) of the measurement model were assessed. Reliability was assessed through the examination of composite reliability values and factor loadings. Construct validity was established based on the assessment of average variance extracted (AVE) values, the Fornell-Larcker Criterion and cross loadings. Subsequent to the assessment of the measurement model in terms of reliability and validity, PLS-SEM was used to assess the structural model. In detail, the structural model was assessed by examining coefficients of determination (R^2), path coefficients and the predictive relevance criterion (Q^2). Ultimately, based on the calculated path coefficients, results of hypotheses testing were determined.

4.9 Summary

In this chapter the justification for adoption the epistemological paradigm of positivism as the main research methodology in this research was presented. Moreover, key steps of the research design and research settings such as country, industry and unit of analysis were presented. In addition, key findings of the qualitative research phase based on interviews with managers and consultants were presented that offer valuable information for the next steps of this research. Next, the process of scale development and qualitative scale purification (i.e. face validity) was described. Subsequently, a detailed description of the three stages of the data

collection process of the main quantitative data was provided. Finally, a brief description of the data analysis techniques including exploratory factor analysis (EFA) and PLS-EM were provided. The next chapter (Chapter 5) presents a detailed analysis of the quantitative data and results from testing of hypotheses.

5. Analysis and Findings

5.1 Introduction

In the following chapter, the analysis and findings based on the main data are presented. In detail, this chapter comprises four main sections. Firstly, details about the characteristics of the sample are presented. Secondly, initial data examination and data preparation are outlined. Thirdly, results of testing for scale reliability and validity are presented and measurement models are explained. Finally, outcomes of testing of hypotheses and control variables and related findings are presented.¹

5.2 Sample Characteristics

Respondents were asked to indicate several aspects related to their company such as company size, company type, and corporate identity structure as well as job position. The following sections present the results of these aspects.

5.2.1 Company Size

Company size was defined in this research based on the number of employees. Respondents were asked to indicate the size of the company by selecting one of eight possible categories provided in the questionnaire. For five of the eight categories, namely 'Less than 10', '10-50', '251-500', '501-1000', '1001-3000' results ranged between 6.0% and 10.7%. However, there were only two respondents in the category '3001-5000', which equals 2.4%. On the other side of the range there was a notably higher number of companies for the two categories '51-250' (28 samples) and 'more than 5000' (17 samples), respectively. Overall, companies from all provided categories are included in the sample. The results for 'Company Size' are presented in the following table (Table 5.1).

¹ An inventory of all variables and items used in this research can be found in Appendix 8 on page 330.

Table 5.1 – Sample Characteristic: Company Size

	Number of Employees	Frequency	Percentage
Valid	Less than 10	7	8.3
	10-50	8	9.5
	51-250	28	33.3
	251-500	9	10.7
	501-1000	5	6.0
	1001-3000	8	9.5
	3001-5000	2	2.4
	More than 5000	17	20.2
	Total	84	100.0

5.2.2 Type of Company

Besides company size, respondents were also asked to indicate whether the company primarily could be characterised as product/manufacturing or service company or others. While 36.9% of the sample refers to product/manufacturing companies, the majority, namely 51.9% are service companies. In addition, in ten cases respondents did not assign to one of the two main categories but ticked the option ‘Other’. In this case respondents were asked to provide further explanation. The descriptions provided by the respondents such as ‘Media’, ‘Insight and Analysis’, ‘IT Software and Services’ and ‘Publishing’ indicate that all of those ten companies actually could be assigned to the category ‘Service Company’. The results for ‘Company Type’ are presented in Table 5.2. A full list of the descriptions provided by respondents for the category ‘Other’ is presented in Table 5.3.¹

¹ If the ten cases that are originally assigned to the category ‘Other’ would be assigned to the category ‘Service Company’, that would lead to the following frequencies and percentages: Product / Manufacturing: 31 (36.9%) and Service: 53 (63.1%).

Table 5.2 – Sample Characteristic: Company Type

	Company Type	Frequency	Percentage
Valid	Product / Manufacturing	31	36.9
	Service	43	51.2
	Other	10	11.9
	Total	84	100.0

Table 5.3 – Descriptions for Company Type ‘Other’

Sample ID	Company Type	Description by Respondent
1	Other	<i>Video Production</i>
6	Other	<i>Maritime Communications</i>
18	Other	<i>Media</i>
22	Other	<i>Insight and Analysis</i>
24	Other	<i>IT Software and Services</i>
27	Other	<i>Publishing</i>
39	Other	<i>Software</i>
43	Other	<i>Publishing</i>
71	Other	<i>Firm of Solicitors</i>
83	Other	<i>Global Financial Services</i>

5.2.3 Corporate Identity Structure

Corporate identity structure is a further aspect that was investigated as part of the questionnaire. Based on the categorisation provided by Olins (1989; 1995; 2008), differentiating between three basic types of identity structure, namely, (1) monolithic (2) endorsed and (3) branded, respondents were asked to indicate the most appropriate option. All three types of identity structure are represented in the sample, with 47.6% for ‘Monolithic’, 25.0% for ‘Endorsed’ and 20.2% for ‘Branded’. In addition, like for company type presented in the last section, respondents had the option to tick ‘Other’ and to describe their identity structure, which was completed

by five respondents. The results for ‘Identity Structure’ are presented in Table 5.4. The full descriptions for ‘Other’ given by the respondents are presented in Table 5.5.

Table 5.4 – Sample Characteristic: Identity Structure

	Identity Structure	Frequency	Percentage
Valid	Monolithic	40	47.6
	Endorsed	21	25.0
	Branded	17	20.2
	Other	5	6.0
	Total	83	98.8
Missing		1	1.2
Total		84	100.0

Table 5.5 – Descriptions for Identity Structure Category ‘Other’

Sample ID	Identity Structure	Description by Respondent
1	Other	<i>Ltd.</i>
20	Other	<i>Our company and most companies that belong to our group are endorsed by the name of the group or the visual identity system of the group, however there are a few that are endorsed by a different name.</i>
34	Other	<i>Mixed portfolio: 45 countries under master brand, some endorsed, some independent</i>
59	Other	<i>We are owned by a group but have our own identity</i>
78	Other	<i>Most of our company is represented by one visual identity and brand but certain sub brands have their own</i>

5.2.4 Job Position

As outlined in Chapter 4, the sampling frame in this research includes a defined set of job positions, namely managers with marketing, branding and communication responsibilities as well as CEO. In order to confirm whether respondents were

eligible to complete in the survey, they were asked to state their current job position. Out of the 84 returned questionnaires two questionnaires had missing entries. For the 82 cases where job positions were provided, the researcher carefully reviewed the responses and no cases were found that would require excluding them from the sample.

5.2.5 Study Request

In the final section of the questionnaire respondents were offered a free copy of the summary of the study results. Out of the 84 respondents, 25 respondents (29.8%) did not wish to receive such a report. However, the majority, namely 58 respondents (69%) indicated to be interested to receive a summary in a digital form as a PDF file. In addition, one respondent (1.2%) preferred to receive a hard copy, although not providing any postal address in the designated field. Finally, there was no missing value for this item. The results for ‘Study Request’ are presented in Table 5.6.

Table 5.6 – Sample Characteristic: Study Request

	Study Request	Frequency	Percentage
Valid	No	25	29.8
	PDF	58	69.0
	Hard Copy	1	1.2
	Total	84	100.0

5.3 Initial Data Examination and Data Preparation

Initial data examination and data preparation are vital steps before conducting any further multivariate analysis, in order to identify any potential violation of the underlying assumptions related to the application of multivariate techniques (Hair et al, 2007). In addition, initial data examination enables the researcher to gain a deeper understanding of the collected data.

Accordingly, following the procedure outlined by Tabachnick and Fidell (2007) the following descriptive analyses were performed: (1) analysis of missing values, (2) analysis of outliers, (3) test of normality of data distribution, (4) test of homoscedasticity and (5) test of multicollinearity (Hair et al, 2007; Tabachnick and Fidell, 2007). All analyses were performed using the IBM SPSS Statistics 19 software package.

5.3.1 Analysis of Missing Values

According to Tabachnick and Fidell (2007), testing for missing values comprises two key steps. Firstly, the amount of missing values needs to be assessed. Secondly, possible patterns of missing values need to be detected in order to assess whether missing values occur randomly or relate to specific items, which could threaten the generalisability of the research findings (Hair et al, 2007).

Starting with the calculation of the amount of missing values, the researcher listed all variables with missing values. This simple procedure not only reveals the total sum of missing values but also shows possible high levels of missing values (Hair et al, 2007). In the entire data set, out of the 51 relevant variables 15 variables had missing data with 19 missing values in total. In detail, there were 12 variables with one missing value, two variables with two missing values and one variable with three missing values. The percentage of missing values was between 0.0% and 3.6% for each variable, with an overall missing value percentage for the entire data set of 0.45%.¹

The following table (Table 5.7) shows missing data by variable for those variables with missing data (For a ‘Descriptive Statistics’ table including all 51 variables please see Appendix 9 on page 374).

¹ Calculation for the missing value percentage for the entire data set: Summed up percentage of missing value (22.8%) divided by number of variables (51) = 0.45% (cf. Hair et al, 2007:51).

Table 5.7 – Missing Data by Variable

Variable	Missing	
	Count	Percentage
INNOVAD1	1	1.2
MKTCOMP3	1	1.2
IMGDIFF2	1	1.2
INTCOM1	1	1.2
CVIM1	1	1.2
CEODRF1 ^a	1	1.2
CEODRF2	1	1.2
CEODRF3	1	1.2
CEODRF4	1	1.2
CEODRF5	2	2.4
CONSQ6	1	1.2
CONSQ7	1	1.2
CONSQ10	3	3.6
IDSTR1	1	1.2
JOB1	2	2.4

^a Negatively worded item

As suggested by Hair et al (2007) the researcher additionally examined missing data per case. Overall there were thirteen cases with missing values. In detail, eleven cases had one missing value, one case had two missing values and one case had six missing values. The following table (Table 5.8) shows missing data by case for those cases with missing data.

Table 5.8 – Missing Data by Case

Sample ID	Missing	
	Count	Percentage
6	1	2.0
23	1	2.0
33	1	2.0
35	6	11.8

46	1	2.0
51	1	2.0
53	1	2.0
60	1	2.0
63	1	2.0
66	2	3.9
68	1	2.0
73	1	2.0
84	1	2.0

Even though Hair et al (2007:55) argue that the issue of missing data generally requires researcher judgement, they also provide a rule of thumb by pointing out that “*missing data under 10% for an individual case or observation can generally be ignored except when the missing data occurs in a specific non-random fashion*”. The highest percentage for missing data per variable was 3.6% and for missing data per case was 3.9% except for one case with 11.8% (Please see Table 5.8). Even though one case with 11.8% was slightly over the suggested acceptable level of 10% (Hair et al, 2007) and therefore might have been a possible candidate for deletion, the overall percentage for missing value was 0.45% for the entire data set, which indicates the absence of excessive levels of missing data. Consequently, no variable or case was deleted at this stage.

In a next step, Little’s MCAR test was performed in order to examine the randomness of the missing data. Little’s MCAR test is an overall test of randomness, analysing “*the pattern of missing data on all variables and compares it with the pattern expected for a random missing data process*” (Hair et al, 2007:57). The null hypothesis for Little’s MCAR test is that the data is missing completely at random and the *p*-value is significant at the 0.05 level (Tabachnick and Fidell, 2007). Only if the data is achieving the MCAR level (i.e. the *p*-value is larger than 0.05), any type of remedy is allowed (Hair et al, 2007).

The significance level of the Little's MCAR test was 0.711, thus showing no significant differences between the observed and the expected missing data pattern process (Little's MCAR test: Chi-Square = 382.866, DF = 399, Sig. = 0.711). Consequently, with results of Little's MCAR test indicating that the data may be regarded as missing completely at random, i.e. achieving MCAR level, the widest range of remedies for missing values is allowed (Hair et al, 2007).

In general there are three main ways of dealing with missing values, namely, complete case approach (also known as list-wise deletion), pairwise deletion and imputation methods (Hair et al, 2007). Firstly, in the case of list-wise deletion, which is the most common solution for missing values (Acock, 2005), each case with missing values will be entirely excluded from the analysis. Hence, this method can result in the deletion of a large number of cases as a result of only few missing variables, which makes it an option for datasets with very few missing values (Hair et al, 2007).

Secondly, using the pair-wise deletion technique results in a deletion only if the data is missing for the specific analysis. For any other analysis the cases will still be included (2010). According to Roth (1994), pair-wise deletion may introduce more bias to the data in comparison to other techniques. In addition, in some occasions pair-wise deletion can lead to "*inconsistent correlations, or a covariance matrix that is not positive definite*" (Roth, 1994:553), which consequently can be problematic when using structural equation models and maximum likelihood-based programs such as LISREL (Acock, 2005; Roth, 1994). The third option refers to a number of imputation methods, including case substitution, hot and cold desk imputation, mean substitution, regression imputation, expectation maximisation (EM) and multiple imputation (Hair et al, 2007; Tabachnick and Fidell, 2007).

Even though mean substitution is frequently used when facing the task of imputing missing values as it is easy to use (Hair et al, 2007; Roth, 1994), this approach might be problematic as it „*attenuates variance and often provides poor imputed values*“ (Acock, 2005:1025). Expectation maximisation (EM), which is "*a maximum likelihood approach that can be used to create a new data set in which all missing*

values are imputed with maximum likelihood values” (Acock, 2005:1018) has shown to provide reliable estimates. According to Roth (1994), imputation methods based on maximum likelihood (ML) estimates such as expectation maximisation (EM) have produced less biased and more accurate estimates in comparison to list-wise deletion, pairwise deletion, mean substitution or regression substitution, albeit showing only small differences.

Based on the presented rationale, missing values were replaced in this study using the expectation maximisation (EM) method. The imputation process was performed using the Missing Value Analysis (MVA) module of the IBM SPSS 19 software package.

5.3.2 Analysis of Outliers

Outliers have been defined as “*observation so different in magnitude from the rest of the observations that the analyst chooses to treat it as a special case*” (Churchill Jr. and Iacobucci, 2004:677). The investigation of univariate and multivariate outliers is an important step of the initial data examination because outliers can “*seriously distort statistical tests*” (Hair et al, 2007:73) and in particular can “*lead to results that do not generalise except to another sample with the same kind of outlier*” (Tabachnick and Fidell, 2007:73).

In a first step, frequency tables were tabulated for all variables in order to detect any values outside the range for each variable as a result of wrong insertion into SPSS. Based on this initial analysis, no values out of the expected range were found. In a next step, boxplots were generated and outliers that were identified by the IBM SPSS 19 software package were noted (Kinnear and Gray, 2010; Tabachnick and Fidell, 2007). The following table (Table 5.9) shows all cases that were identified as outliers in the boxplots.

Table 5.9 – Outliers Identified in Boxplots

Item	Case ID
INNOVAD3 ^a	25, 29
INNOVAD5 ^a	29
CEODRF3	13, 79

^a Negatively worded item

In order to assess the extent to which the identified outliers could be problematic (Hair et al, 2007), the mean value for each variable was compared with the 5% trimmed mean value, which indicates the influence of the outlier on the mean (Pallant, 2010). The comparison showed little difference between the mean and the 5% trimmed mean for all potential outliers, which indicates that the univariate outliers identified by SPSS have no strong influence on the mean. The following table (Table 5.10) shows the mean and 5% trimmed mean values for the variables that were identified as outliers in the boxplots.

Table 5.10 – Means and 5% Trimmed Means for Outliers

Item	Mean	5% Trimmed Mean	Difference
INNOVAD2 ^a	2.50	2.37	0.13
INNOVAD5 ^a	2.33	2.22	0.11
CEODRF3	2.12	1.94	0.18

^a Negatively worded item

In a further step, all data values were converted into standard scores (z-scores), with a mean of 0 and a standard deviation of 1, which allows easy comparison across variables (Hair et al, 2007). In smaller samples with 80 or less cases, observations exceeding the value of ± 2.5 can be defined as outliers (Hair et al, 2007). Based on the analysis of standardised scores, 16 cases were identified as potential univariate outliers. In detail, fourteen observations (case 1, 4, 19, 23, 42, 47, 51, 58, 62, 63, 65, 67, 75, 76) exceeded the threshold on only one variable, six observations (case 14, 25, 41, 44, 55, 79) on two variables, one observation (case 13) on four variables and one observation (case 29) on seven variables. The following table (Table 5.11) presents the results of this analysis.

Table 5.11 – Outliers Identified based on Standardised Scores

Item	Cases with Standardised Values Exceeding ± 2.5
FWTH1	14, 29, 63
FWTH2	14, 29, 55
FWTH4	55
INNOVAD2 ^a	25, 29
INNOVAD3 ^a	19
INNOVAD4	29
INNOVAD5 ^a	29, 62
MKTCOMP1	29, 67
IMGDIFF1	51, 58
INTCOM2	41
INTCOM4	41
CVIM5	13, 23, 29, 42, 76
CAIM2	1, 13, 25, 44, 47, 75
CEODRF3	13, 79
CEODRF4	4, 13, 44, 65, 79,

^a Negatively worded item

In comparison to the other identified outliers, case 29 exceeded the threshold on a notably greater number of variables (i.e. seven variables). Consequently, in order to assess the influence of this particular case, the effect on the overall measures of the variables namely the mean and standard deviation were tested. Results show that even though case 29 was identified as an outlier on seven variables, no strong effect on the mean and standard deviation of each of the seven variables was found, as presented in the following table (Table 5.12 on page 237).

Table 5.12 – Effect of Case 29 on Mean and Standard Deviation

Item	Mean	Mean excl. Case 29	Difference	SD	SD excl. Case 29	Difference
FWTH1	5.95	6.00	0.05	1.251	1.179	0.072
FWTH2	5.68	5.72	0.04	1.319	1.262	0.057
INNOVAD2 ^a	2.50	2.45	0.05	1.469	1.390	0.079
INNOVAD4	5.01	5.06	0.05	1.460	1.400	0.060
INNOVAD5 ^a	2.33	2.28	0.05	1.426	1.337	0.089
MKTCOMP1	6.12	6.16	0.04	1.091	1.042	0.049
CVIM5	5.40	5.46	0.06	1.750	1.691	0.059

^a Negatively worded item

Note: SD = Standard Deviation

In a final step, the data also was tested for multivariate outliers, using the Mahalanobis D^2 measure, which “*evaluates the position of each observation compared with the center of all observations on a set of variables*” (Hair et al, 2007:77). According to Tabachnick and Fidell (2007:74) the Mahalanobis D^2 measure refers to the “*distance of a case from the centroid of the remaining cases where the centroid is the point created at the intersection of the means of all the variables*”. Mahalanobis D^2 is evaluated as a chi-square distribution with degrees of freedom equal to the number of independent variables in the analysis (D^2/df) (Tabachnick and Fidell, 2007). The criterion for multivariate outliers is Mahalanobis scores at a significance level of $p < 0.001$ (Hair et al, 2007; Tabachnick and Fidell, 2007).

Accordingly, Mahalanobis D^2 measures were computed using linear regression method in IBM SPSS 19, which was followed by the computation of the p -values using the Cumulative Distribution Function in IBM SPSS 19.¹ Results of the analysis of Mahalanobis D^2 scores revealed no p -values equal or smaller than 0.001, which indicates the absence of multivariate outliers in the data set (For a full list of results of the Mahalanobis D^2 analysis please see Appendix 10 on page 376).

¹ Cumulative Distribution Function: 1 - CDF.CHISQ(quant, df)

Overall, as a result of the analysis of univariate and multivariate outliers, through the examination of frequency tables and boxplots, the comparison of means and trimmed means as well as the analysis of Mahalanobis D^2 scores, some univariate outliers but no multivariate outliers were detected. With regard to the univariate outliers, all extreme cases were similar enough to the remaining observations to be defined as representative of the population (Churchill Jr. and Iacobucci, 2004; Hair et al, 2007). According to Hair et al (2007:76), cases only should be deleted if “*demonstrable proof indicates that they are truly aberrant and not representative of any observations in the population*”. Otherwise, cases should be retained in order to increase the generalisability to the entire population (Hair et al, 2007). Consequently, no observations were deleted for later multivariate analysis.

5.3.3 Test of Normality

Following the examination of outliers, the normality of distribution was examined. Normal distribution is an important assumption for most statistical tests as well as structural equation modelling (Hair et al, 2007). According to Hair et al (2007:79) normality refers to “*the shape of the data distribution for an individual metric variable and its correspondence to the normal distribution, the benchmark for statistical methods*”. In order to test the variables for normality, graphical as well as statistical methods were applied (Tabachnick and Fidell, 2007).

In a first step, graphical examination were performed by examining histograms and, what is more reliable, by inspecting normal probability plots (also termed Normal Q-Q Plots) for all metric variables (Hair et al, 2007). Normal probability plots provide a comparison of the actual observed data with expected data of a normal distribution (Hair et al, 2007; Tabachnick and Fidell, 2007). The examination of histograms and normal probability plots indicated deviation from normality for several of the variables.

In order to further assess possible deviation from univariate normality, in a second step, the shape of the distributions were inspected by examining the skewness and kurtosis measures of the distributions (Hair et al, 2007; Tabachnick and Fidell,

2007). While skewness provides information about the degree of symmetry of a distribution, kurtosis on the other hand provides information on the peakedness or flatness of a distribution. Accordingly, while a positively or negatively skewed variable has a mean not in the centre of the distribution, a distribution with a positive or negative kurtosis score is overly peaked or flat, respectively (Field, 2009; Tabachnick and Fidell, 2007). In the case of a normal distribution, values for skewness as well as kurtosis are zero.¹ Z-values calculated from skewness and kurtosis scores exceeding a critical value of ± 2.58 (0.01 significance level) indicate deviation from normal distribution (Field, 2009; Hair et al, 2007; Tabachnick and Fidell, 2007).

Based on the above threshold, out of the 46 metric variables, 22 variables show scores that indicate skewness and three variables show scores that suggest significant kurtosis. The following table (Table 5.13) summarises the results of examining normality based on skewness and kurtosis characteristics.

Table 5.13 – Results of Skewness and Kurtosis Analysis

Item	Mean	SD	Skewness			Kurtosis		
			Statistics	SE	z-value	Statistics	SE	z-value
FWTH1	5.95	1.251	-1.498	0.263	-5.705	2.157	0.520	4.151
FWTH2	5.68	1.319	-1.028	0.263	-3.915	0.680	0.520	1.308
FWTH3	5.39	1.423	-0.755	0.263	-2.873	-0.077	0.520	-0.149
FWTH4	5.21	1.406	-0.658	0.263	-2.507	0.100	0.520	0.192
INNOVAD1	4.06	1.438	-0.449	0.263	-1.708	-0.319	0.520	-0.614
INNOVAD2 ^a	5.50	1.469	-1.111	0.263	-4.229	0.944	0.520	1.816
INNOVAD3 ^a	5.15	1.427	-0.560	0.263	-2.131	-0.111	0.520	-0.214
INNOVAD4	5.01	1.460	-0.735	0.263	-2.797	-0.053	0.520	-0.103
INNOVAD5 ^a	5.67	1.426	-0.998	0.263	-3.799	0.364	0.520	0.701
MKTCOMP1	6.12	1.091	-1.268	0.263	-4.827	1.596	0.520	3.071
MKTCOMP2	4.49	2.003	-0.286	0.263	-1.090	-1.135	0.520	-2.185
MKTCOMP3	4.12	1.727	-0.170	0.263	-0.648	-1.069	0.520	-2.058
MKTCOMP4	3.63	1.663	0.047	0.263	0.178	-1.213	0.520	-2.334

¹ The kurtosis value for a normal distribution is 3, while the excess score is 0 (excess = kurtosis - 3). Software packages such as IBM SPSS by default subtract 3 from the kurtosis score (Tabachnick and Fidell, 2007).

IMGDIFF1	5.25	1.520	-0.858	0.263	-3.267	0.230	0.520	0.442
IMGDIFF2	3.40	1.830	0.354	0.263	1.347	-0.883	0.520	-1.700
IMGDIFF3	4.42	1.652	-0.302	0.263	-1.148	-0.741	0.520	-1.426
IMGDIFF4	3.33	1.759	0.441	0.263	1.678	-0.751	0.520	-1.445
INTCOM1	4.02	2.105	-0.135	0.263	-0.515	-1.463	0.520	-2.816
INTCOM2	4.75	1.496	-0.510	0.263	-1.942	-0.643	0.520	-1.237
INTCOM3	4.86	1.592	-0.788	0.263	-3.002	-0.176	0.520	-0.338
INTCOM4	4.87	1.421	-0.538	0.263	-2.048	-0.244	0.520	-0.470
CVIM1	5.24	1.781	-0.955	0.263	-3.634	-0.084	0.520	-0.162
CVIM2	4.36	1.905	-0.315	0.263	-1.200	-0.968	0.520	-1.864
CVIM3	4.98	1.672	-0.786	0.263	-2.992	-0.148	0.520	-0.285
CVIM4	4.79	1.722	-0.486	0.263	-1.849	-0.605	0.520	-1.165
CVIM5	5.40	1.750	-1.129	0.263	-4.298	0.474	0.520	0.912
CAIM1	2.40	1.908	1.221	0.263	4.649	0.330	0.520	0.635
CAIM2	2.27	1.884	1.386	0.263	5.276	0.802	0.520	1.543
CAIM3	2.38	1.969	1.264	0.263	4.811	0.260	0.520	0.500
CAIM4	2.51	2.033	1.062	0.263	4.044	-0.284	0.520	-0.547
CAIM5	3.08	2.251	0.641	0.263	2.440	-1.087	0.520	-2.092
CEODRF1 ^a	2.51	1.955	1.012	0.263	3.852	-0.221	0.520	-0.425
CEODRF2	2.96	1.966	0.566	0.263	2.156	-0.849	0.520	-1.633
CEODRF3	2.12	1.639	1.391	0.263	5.297	0.938	0.520	1.805
CEODRF4	2.37	1.822	1.243	0.263	4.733	0.498	0.520	0.957
CEODRF5	2.60	1.856	0.972	0.263	3.702	-0.203	0.520	-0.390
CONSQ1	4.49	1.773	-0.644	0.263	-2.452	-0.357	0.520	-0.686
CONSQ2	4.06	1.731	-0.408	0.263	-1.553	-0.624	0.520	-1.201
CONSQ3	4.49	1.766	-0.631	0.263	-2.404	-0.480	0.520	-0.923
CONSQ4	4.68	1.811	-0.527	0.263	-2.005	-0.656	0.520	-1.262
CONSQ5	4.61	1.749	-0.660	0.263	-2.514	-0.292	0.520	-0.561
CONSQ6	4.17	1.741	-0.345	0.263	-1.312	-0.575	0.520	-1.107
CONSQ7	4.99	1.760	-1.001	0.263	-3.811	0.271	0.520	0.521
CONSQ8	4.92	1.751	-0.974	0.263	-3.707	0.141	0.520	0.270
CONSQ9	4.13	1.713	-0.312	0.263	-1.186	-0.533	0.520	-1.026
CONSQ10	4.05	1.748	-0.244	0.263	-0.930	-0.657	0.520	-1.264

^a Negatively worded items have been recoded.

Notes: SE = Standard Error; N = 84; The z-values were calculated by dividing the statistics by the standard errors (cf. Hair et al, 2007); Scores exceeding critical value of ± 2.58 (0.01 significance level) are marked bold.

In a third step, the Kolmogorov-Smirnov test and Shapiro-Wilks test were performed, which are two of the most common statistical tests to examine normality (Hair et al, 2007). Since tests of significance are less useful for small sample size, it is advisable to combine statistical tests with examination based on graphical plots (i.e. histograms and normal probability plots) as described above, for assessing the normality assumption (Hair et al, 2007). Results from the Kolmogorov-Smirnov and the Shapiro-Wilks test ($p < 0.05$) suggest violation of the assumption of normality for all variables (For a table including results of the Kolmogorov-Smirnov and the Shapiro-Wilks test for all variables please see Appendix 11 on page 379).

Overall, depending on the method that was used to assess univariate normality, violation of the assumption of normality was discovered for either all variables (i.e. Kolmogorov-Smirnov and the Shapiro-Wilks test) or for some of the variables (i.e. normal probability plots, and skewness and kurtosis statistics). However, according to Bagozzi and Yi (1988:81), “*in managerial and social science research it is unlikely that the statistical assumptions will ever be met in a strict sense*”. Furthermore, Hair et al (2007:99) emphasise that “*even analyses with small sample sizes can withstand small, but significant, departures from normality.*” They continued by pointing out that it is much more crucial that a researcher understands “*the implications of each assumption with regard to the technique of interest, striking a balance between the need to satisfy the assumptions versus the robustness of the technique and research context*”.

5.3.4 Test of Homoscedasticity

The existence of homoscedasticity, which refers to the assumption that “*the variability in scores for one continuous variable is roughly the same at all values for another continuous variable*” (Tabachnick and Fidell, 2007:85) constitutes another assumption of multivariate analysis. In more detail, homoscedasticity also has been referred to the assumption that “*dependant variable(s) exhibit equal levels of variance across the range of predictor variables(s)*” (Hair et al, 2007:83). According to Tabachnick and Fidell (2007:85) the violation of homoscedasticity might weaken the analysis but is “*not fatal to an analysis of ungrouped data*”.

The assumption of homoscedasticity in this research was examined graphically as well as statistically. Firstly, residual scatterplots between standardised residuals (i.e. errors of prediction) and standardised predicted dependent variables was produced (Hair et al, 2007; Tabachnick and Fidell, 2007). The scatterplots showed that the residuals were fairly equally distributed above and below the central line of the y-axis (i.e. the 0 point), which indicates the absence of homoscedasticity. Nevertheless, the overall shape of the scatterplots to some extent could be interpreted as showing some tendency towards a diamond shape pattern. According to Hair et al (2007:207) “*a diamond-shaped pattern can be expected in the case of percentages where more variation is expected in the midrange than in the tails*”. Bearing this in mind, some tendency of heteroscedasticity could be assumed.

Thus, in order to further investigate the assumption of homoscedasticity, the Levene test of homoscedasticity, which is the most common test “*to assess whether the variances of a single metric variable are equal across any number of groups*” (Hair et al, 2007:84), was performed. According to Hair et al (2007:207) the Levene test, which is a one-way ANOVA (Bryman and Cramer, 2011), is “*particularly recommended because it is less affected by departures from normality, [...]*”.

Results of the Levene test show *p*-values for the majority of the variables exceeding the 0.05 significance level (Field, 2009), indicating that the assumption of homoscedasticity is tenable. However, out of the 46 metric variables that were tested, eight variables show patterns of heteroscedasticity on one of the non-metric variables and four variables show patterns of heteroscedasticity on two of the non-metric variables. Nevertheless, none of the metric variables show patterns of heteroscedasticity on more than two of the non-metric variables (For a table including the results of the Levene test please see Appendix 12 on page 381).

Overall, with regard to these findings the researcher follows the assessment by Hair et al (2007:94), arguing that “*the relative lack of either numerous problems or any consistent patterns across one of the nonmetric variables suggests that heteroscedasticity problems will be minimal*”.

The examination of assumptions of multivariate analysis has shown some possible problems with normality (i.e. skewness and kurtosis) and homoscedasticity. However, mainly owing to the rather small sample size in this research, Partial Least Squares Structural Equation Modeling (PLS-SEM) was employed for hypothesis testing rather than Covariance Based Structural Equation Modelling (CB-SEM) (PLS-SEM will be discussed in more detail in Section 5.5 on page 262). According to Hair et al (2011a:139-140) “*in comparison with CB-SEM results, which can be highly imprecise when the assumptions are violated, PLS-SEM often provides more robust estimations of the structural model*“. Since PLS-SEM is less affected by the violation of the assumptions of multivariate analysis, none of the data transformation techniques were applied at this stage.

5.3.5 Test of Multicollinearity

Multicollinearity refers to the relationship between more than two independent variables (Hair et al, 2007). In an ideal case, independent variables are highly correlated with the dependant variable but show little correlation among each other (Hair et al, 2007). Multicollinearity can have substantive effects “*on the predictive ability of the regression model*” as well as on “*the estimation of the regression coefficients and their statistical significance tests*” (Hair et al, 2007:228). In detail, in the case of multicollinearity the assessment of the individual contribution of each predictor variable becomes more difficult or even impossible because the effects of the independent variables are confounded (Field, 2009; Hair et al, 2007). Moreover, if multicollinearity increases, the standard errors of the regression coefficients increase and consequently the statistical significance of these coefficients become less trustworthy (Field, 2009; Tabachnick and Fidell, 2007). Finally, multicollinearity can limit the size of the correlation coefficients (Field, 2009).

In order to diagnose multicollinearity, in a first step, the correlation matrix for the independent variables was examined for high correlations with a suggested threshold of 0.90 (Hair et al, 2007; Tabachnick and Fidell, 2007). The examination showed that

only two variables, namely CEODRF3 and CEODRF4 show high correlation with a correlation coefficient of 0.901, which is just above the suggested threshold level.

In a next step, multicollinearity was tested by examining the tolerance values and the variance inflation factor (VIF) as provided by the collinearity diagnostics of the IBM SPSS software (Hair et al, 2007). While tolerance value is defined as “*the amount of variability of the selected independent variable not explained by the other independent variable*”, the variance inflation factor (VIF) simply is the inverse of the tolerance value (Hair et al, 2007:227). According to Hair et al (2007) tolerance values below 0.10 and VIF values above 10 indicate high collinearity.

Only one variable, namely CEODRF4 was found to exceed the threshold values for tolerance and VIF (tolerance = 0.065; VIF = 15.438). This result confirms the finding from the examination of the correlation matrix in the last section, where a high correlation (0.901) between CEODRF4 and CEODRF3 was detected. Consequently, it is no surprise that tolerance and VIF values for the variable CEODRF3 were just below the threshold values (tolerance = 0.102; VIF = 9.795).¹ (For a table including the tolerance and VIF values please see Appendix 13 on page 383). Overall, with only one single variable exceeding the threshold values for tolerance, VIF and correlation coefficient, it can be concluded that multicollinearity is not a severe problem in this research.

5.4 Scale Simplification: Reliability and EFA

Following the initial data examination and data preparation of the original data set as described in the last chapter, the measurement scales were assessed in terms of internal reliability and unidimensionality of the constructs (Gerbing and Anderson, 1988).

¹ With regard to PLS-SEM, values for VIF should be less than 5 (Hair et al, 2011a). In this research out of 31 independent variables seven variables show VIF values above 5.

5.4.1 Reliability Assessment

Reliability, which is a necessary condition for validity, is concerned with the extent to which measures are “free from errors and therefore yield consistent results” (Peter, 1979:6). Moreover, Peter (1979:6) stresses that “unreliable measures attenuate (lessen) the correlation between measures”. Furthermore, researchers, whenever possible, should apply multi-item scales, since they “allow measurement errors to cancel out against each other and thus the reliability of the scale is increased” (Peter, 1979:6).

Internal consistency, which is one way to test for reliability, basically assesses the homogeneity of a set of items (Hair et al, 2007; Peter, 1979), that is, showing the degree to which the items of one scale capture the same construct (DeVellis, 2003). The examination of the Cronbach alpha coefficient is one of the most widely used ways by which researchers assess internal consistency of measurement scales (Cronbach, 1951; Hair et al, 2007). Cronbach alpha coefficients as well as corrected item-total correlations were calculated separately for each scale. The following table (Table 5.14) presents the results of the scale reliability analysis.¹

Table 5.14 – Results of Scale Reliability Analysis

Construct	Item	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted	Cronbach's Alpha
Forward Thinking	FWTH1	0.760	0.868	0.895
	FWTH2	0.849	0.834	
	FWTH3	0.783	0.859	
	FWTH4	0.687	0.895	
Innovation Adoption	INNOVAD1	0.229*	0.680**	0.653***
	INNOVAD2 ^a	0.460	0.575	
	INNOVAD3 ^a	0.299*	0.649	
	INNOVAD4	0.437	0.586	
	INNOVAD5 ^a	0.636	0.486	
Market Competition	MKTCOMP1	0.472	0.679	0.709

¹ The constructs linked to the 10 consequences (CONSQ1 to CONSQ10) have been conceptualised to be measured as single-item scales. Consequently, no internal consistency test was performed.

	MKTCOMP2	0.595	0.582	
	MKTCOMP3	0.416	0.696	
	MKTCOMP4	0.565	0.602	
Image Differentiation	IMGDIFF1	0.451	0.845**	0.816
	IMGDIFF2	0.674	0.751	
	IMGDIFF3	0.730	0.725	
	IMGDIFF4	0.706	0.735	
Integrated Communication	INTCOM1	0.449	0.914**	0.830
	INTCOM2	0.824	0.718	
	INTCOM3	0.803	0.720	
	INTCOM4	0.672	0.785	
CVI Management	CVIM1	0.758	0.874	0.899
	CVIM2	0.694	0.890	
	CVIM3	0.816	0.862	
	CVIM4	0.839	0.857	
	CVIM5	0.652	0.897	
CAI Management	CAIM1	0.865	0.916	0.936
	CAIM2	0.869	0.915	
	CAIM3	0.875	0.913	
	CAIM4	0.846	0.919	
	CAIM5	0.719	0.946**	
CEO Driving Force	CEODRF1 ^a	0.537	0.929**	0.903
	CEODRF2	0.667	0.902	
	CEODRF3	0.877	0.859	
	CEODRF4	0.892	0.852	
	CEODRF5	0.867	0.857	

^a Negatively worded items have been recoded.

* Items with values for 'Corrected Item-Total Correlation' below the 0.3 threshold value.

** Potential candidates for deletion based on value for 'Cronbach's Alpha if Item Deleted'.

*** Item with Cronbach's Alpha below the 0.7 threshold value.

Cronbach alpha values of 0.70 or higher generally indicate satisfactory internal consistency (Bryman and Cramer, 2011; Hair et al, 2007; Nunnally, 1967; Nunnally and Bernstein, 1994), while a value of 0.60 is also satisfactory in the case of exploratory research (Hair et al, 2007). For corrected item-total correlation values of 0.30 and more have been suggested to be acceptable (Field, 2009).

Results show that all scales had Cronbach alpha values above the suggested critical value of 0.70 except for one scale. The scale measuring the Innovation Adoption construct (INNOVAD) produced an alpha value of only 0.653. However, following Hair et al (2007) suggesting that a value of 0.60 is also satisfactory in the case of exploratory research, no item was dropped based on the Cronbach alpha values at this stage.

Results for the analysis of item-total correlations revealed two items below the 0.30 threshold value. For the item INNOVAD1 the item-total correlation was 0.229 and for INNOVAD3 the value was 0.299. Bearing in mind that the Cronbach alpha value for the Innovation Adoption scale (INNOVAD) was 0.653, thus being below the suggested threshold value of 0.70, the two items INNOVAD1 and INNOVAD3 were candidates for deletion. In order to test the effect of dropping item INNOVAD1 and INNOVAD3 of the Innovation Adoption scale, the Cronbach alpha value was calculated for the Innovation Adoption scale after the deletion of INNOVAD1 and INNOVAD3. Results show that dropping item INNOVAD1 and INNOVAD3 would lead to a minor increase of the Cronbach alpha value from 0.653 (before deletion) to 0.684 (after deletion), which is an improvement by only 0.031. More importantly, since the deletion of the two items would lead to a Cronbach value still remaining below 0.70 (Please see Table 5.15 on page 248), both items INNOVAD1 and INNOVAD3 were retained for the next stage of exploratory factor analysis.

Finally, values for 'Cronbach's Alpha if Item Deleted' as produced by the IBM SPSS 19 software were examined. Results show four items (IMGDIFF1, INTCOM1, CAIM5, CEODRF1) with values that suggest an improvement of the Cronbach alpha value if the items were deleted (Please see Table 5.14 on page 245).

Table 5.15 – Innovation Adoption Scale before and After Item Deletion

Innovation Adoption scale BEFORE deletion of item INNOVAD1 and INNOVAD3				
Construct	Item	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted	Cronbach's Alpha
Innovation Adoption	INNOVAD1	0.229*	0.680	0.653**
	INNOVAD2 ^a	0.460	0.575	
	INNOVAD3 ^a	0.299*	0.649	
	INNOVAD4	0.437	0.586	
	INNOVAD5 ^a	0.636	0.486	
Innovation Adoption scale AFTER deletion of item INNOVAD1 and INNOVAD3				
Construct	Item	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted	Cronbach's Alpha
Innovation Adoption	INNOVAD2 ^a	0.386	0.730	0.684**
	INNOVAD4	0.466	0.630	
	INNOVAD5 ^a	0.661	0.371	

^a Negatively worded items have been recoded.

* Items with values for 'Corrected Item-Total Correlation' below the 0.30 threshold value.

** Item with Cronbach's Alpha below the 0.70 threshold value.

When examining the possible improvements in more detail, the following increases for each of the four items were suggested. The deletion of item IMGDIFF1 would result in an increase of the Cronbach alpha value for the IMGDIFF scale from 0.816 to 0.845, which equals an increase of 0.029. The deletion of item INTCOM1 would result in an increase of the Cronbach alpha value for the INTCOM scale from 0.830 to 0.914, which equals an increase of 0.084. The deletion of item CAIM5 would result in an increase of the Cronbach alpha value for the CAIM scale from 0.936 to 0.946, which equals an increase of 0.010. The deletion of item CEODRF1 would result in an increase of the Cronbach alpha value for the CEODRF scale from 0.903 to 0.929, which equals an increase of 0.026 (Please see Table 5.16 on page 249).

Table 5.16 – Scales After Suggested Item Deletion

Item Suggested for Deletion	Cronbach's Alpha BEFORE Deletion	Cronbach's Alpha AFTER Deletion	Increase of Cronbach's Alpha
IMGDIFF1	0.816	0.845	0.029
INTCOM1	0.830	0.914	0.084
CAIM5	0.936	0.946	0.010
CEODRF1 ^a	0.903	0.929	0.026

^a Negatively worded item has been recoded.

Except for the Integrated Communication (INTCOM) scale, the achievable improvement of Cronbach alpha was considered by the researcher not to be extensive. More important, based on the fact that all four scales already showed Cronbach alpha values considerably above the critical 0.70 threshold value, no items were dropped at this stage but retained for exploratory factor analysis, which is described in the next chapter.

5.4.2 Exploratory Factor Analysis

Following the scale purification based on the examination of internal consistency, in a next step, exploratory factor analysis (EFA) was employed. According to Baird (1987:320), “*exploratory factor analysis should be understood as an information transforming instrument*”. Zikmund (2003:586) refers to the general purpose of factor analysis as “*to summarize the information contained in a large number of variables into a smaller number of factors*”. That is, exploratory factor analysis divides the manifest variables into clusters and consequently reflects the dimensions of the underlying constructs. As DeVillis (2003:103) points out, one of the key functions of exploratory factor analysis is to help determining “*how many latent variables underlie a set of items*”. Ultimately, the aim is to achieve unidimensionality of the constructs (Gerbing and Anderson, 1988) and generally to obtain a reduced and thus more manageable number of items (Field, 2009; Hair et al, 2007; Netemeyer et al, 2003).

Furthermore, in this research new measurement scales were developed (e.g. Corporate Auditory Identity Management) by borrowing and adapting items from other more established scales (e.g. Corporate Visual Identify Management). In addition, several items were included as a result of the qualitative phase of this research. Taking into account the rationale of exploratory factor analysis as described above, conducting EFA was considered to be highly appropriate.

Prior to performing exploratory factor analysis the researcher has to decide which method to use for the extraction of factors. Exploratory factor analysis basically can be performed based on two methods, that is, Principal Component Analysis (PCA) and Common Factor Analysis (Hair et al, 2007). The main difference of these two methods is based on the different use of the explained (unique) variance versus unexplained (common) variance (Bryman and Cramer, 2011; Field, 2009; Hair et al, 2007; Tabachnick and Fidell, 2007). According to Hair et al (2007:117) principal component analysis “*considers the total variance and derives factors that contain small proportions of unique variance and, in some instances, error variance*”. In contrast, common factor analysis “*considers only the common or shared variance, assuming that both the unique and error variance are not of interest in defining the structure of the variables*” (Hair et al, 2007:117-118).

Moreover, principal component analysis is appropriate if the key aim is to identify the minimum numbers of factors that account for the maximum total variance in the data and to reduce “*a large number of variables down to a smaller number of components*” (Tabachnick and Fidell, 2007:635). Common factor analysis on the other hand focuses on the identification of underlying factors or dimensions that are commonly represented in the measured variables (Hair et al, 2007). Since the aim of the researcher was to identify the minimum number of factors based on the total variance in the data as well as to minimise the number of items to a more manageable set, principal component analysis was used.

A further aspect that needs to be considered when performing exploratory factor analysis is factor rotation. The factor matrix derived from an initial unrotated analysis can provide ambiguous results and can be difficult to interpret (Hair et al,

2007; Tabachnick and Fidell, 2007). That is, factors that highly load on the most important factor also have smaller loadings on all other factors (Field, 2009) or even have not only small but significant cross-loadings on several factors (Hair et al, 2007).

In order to address this problem, factor rotation can be used which basically improves the differentiation of factors by amplifying factor loadings (Bryman and Cramer, 2011; Field, 2009). In other words, as a result of factor rotation “*the loadings of the variables are maximized onto one factor (the factor that intersects the cluster) and minimized on the remaining factor(s)*” (Field, 2009:642). The ultimate objective of applying factor rotation then is “*to achieve simpler and theoretically more meaningful factor solutions*” (Hair et al, 2007:123).

There are two types of factor rotation, namely, orthogonal and oblique factor rotation (Bryman and Cramer, 2011; Hair et al, 2007). While in the case of orthogonal rotation independent factors remain independent (unrelated) of all other factors when rotated, with oblique rotation extracted factors are allowed to correlate (Field, 2009; Hair et al, 2007). Based on the fact that in this research the underlying factors are not a priori considered to be related, an orthogonal factor rotation using the varimax method was applied (Field, 2009; Hair et al, 2007).¹

In order to successfully perform exploratory factor analysis (EFA) some basic assumptions need to be satisfied. Firstly, a minimum sample size of 50 observations is required (Hair et al, 2007), which was satisfied in this research (n = 84). Secondly, a minimum of five observations per item in each factor analysis is required (Hair et al, 2007). In order to fulfil this assumption, constructs were divided into three groups

¹ The varimax method, which is a variance maximising procedure (Tabachnick and Fidell, 2007), was used instead of other orthogonal methods (i.e. quartimax and equimax) since the varimax method “*tries to load a smaller number of variables highly onto a each factor resulting in more interpretable clusters of factors*” (Field, 2009:644) and because this method “*has proved successful as an analytic approach to obtaining an orthogonal rotation of factors*” (Hair et al, 2007:126).

with a maximum of 15 items per group.¹ The grouping of constructs was based on a review of the literature and theoretically related constructs were grouped together.

As a result of this procedure, the first group consisted of three constructs, namely, Forward Thinking (FWTH), Innovation Adoption (INNOVAD) and Market Competition (MKTCOMP). By combining these three constructs 13 items were available for EFA, which satisfies the 5:1 rule (Hair et al, 2007). The second group consisted of two constructs, namely, Image Differentiation (IMGDIFF) and Integrated Communication (INTCOM). This combination resulted in 8 items, which also satisfies the 5:1 rule. Finally, the third group consisted of three constructs, namely, CVI Management (CVIM), CAI Management (CAIM) and CEO Driving Force (CEODRF). This resulted in 15 items for EFA, which is also in line with the 5:1 rule. It has to be noted that the constructs related to the ten consequences (CONSQ1 – CONSQ10) as proposed in the conceptual framework in Chapter 3 were conceptualised to be measured as single-item scales and thus were not part of exploratory factor analysis. The following table (Table 5.17) presents the three groups that were formed for exploratory factor analysis (EFA).

Table 5.17 – Groups as Defined for Exploratory Factor Analysis (EFA)

Group	Construct	Number of Items
Group 1 (13 items)	Forward Thinking (FWTH)	4
	Innovation Adoption (INNOVAD)	5
	Market Competition (MKTCOMP)	4
Group 2 (8 items)	Image Differentiation (IMGDIFF)	4
	Integrated Communication (INTCOM)	4
Group 3 (15 items)	CVI Management (CVIM)	5
	CAI Management (CAIM)	5
	CEO Driving Force (CEODRF)	5

Note: Constructs related to the proposed consequences were conceptualised to be measured as single-item scales and thus were not part of exploratory factor analysis.

¹ The possible maximum number of items per group was 16 (Sample size n = 84 divided by 5 = 16.8)

Each group was then subjected to exploratory factor analysis (EFA) using the data reduction tool in IBM SPSS 19 and following a step-by-step process as described in the next section (Field, 2009; Hair et al, 2007). In a first step, the correlation matrix (R matrix) was examined to make sure that there is an acceptable number of variables with correlations greater than 0.30, that is, variables correlate acceptably well but not perfectly, which is preferable when conducting exploratory factor analysis (Tabachnick and Fidell, 2007). Next, the determinant of the correlation matrix was examined for values greater than 0.00001 which indicates that multicollinearity is not a problem (Field, 2009). Subsequently, the Kaiser-Meyer-Olkin measure of sampling adequacy (KMO) was inspected for values greater than 0.60. In addition, KMO values for individual items as presented in the diagonal of the Anti-Image Correlation Matrix were examined for values greater than the threshold value of 0.50, indicating whether factor analysis is appropriate for the data (Field, 2009; Hair et al, 2007; Kaiser, 1974). Next, results of the Bartlett's Test of Sphericity (BTS) were examined to see if the values were significant ($p < 0.05$), which implies that the correlation matrix is not an identity matrix (Field, 2009; Hair et al, 2007; Stevens, 1996).

Following the testing of assumptions of exploratory factor analysis (EFA) as well as sampling adequacy, the results of EFA were examined with regard to the number of extracted factors. Firstly, the latent roots (eigenvalues) were examined and factors with eigenvalues greater than 1 were considered significant and thus were retained (Field, 2009; Hair et al, 2007; Kaiser, 1960). Next, scree plots in which each eigenvalue is plotted against the factor with which it is associated (Field, 2009) were visually examined to confirm the results based on the latent root criterion (Cattell, 1966; Field, 2009; Hair et al, 2007; Kinnear and Gray, 2010). It has to be noted that results based on scree plot criterion frequently produce at least one or even two or three more factors than results based on the latent root criterion (Hair et al, 2007). Moreover, it also has to be taken into consideration that the reliability of the scree plot criterion is limited for sample sizes smaller than 200 as is the case in this research (Field, 2009). Nevertheless, since it is generally advisable to employ several stopping criteria to determine the final number of factors to be retained (Hair et al,

2007), scree plots were examined while bearing in mind the before mentioned limitations.

Next, factor loadings of each variable onto each factor as presented in the Rotated Component Matrix were examined. Values greater than ± 0.50 were retained as this threshold value is “*generally considered necessary for practical significance*” (Hair et al, 2007:129). Simultaneously, the matrix was scanned for significantly high cross-loadings, that is, items with loadings greater than ± 0.50 on more than one factor (Field, 2009; Hair et al, 2007).

Furthermore, the communalities after extraction which represent “*the amount of variance on a variable accounted for by the set of factors*” (Stevens, 1996:366) or in other words “*a measure of the proportion of variance explained by the extracted factors*” (Field, 2009:637) were inspected. Any variable with communalities less than 0.50 generally were considered to have unsatisfactory explanation of variance, i.e. less than 50% of the variance was explained by the factor solution (Hair et al, 2007). In a last step, the reliability of scales based on the final version of the suggested factor structure was assessed. That is, Cronbach coefficient alpha values were confirmed once more to be 0.70 or higher (Bryman and Cramer, 2011; Hair et al, 2007; Nunnally, 1967) and item-total correlations were verified to exceed the minimum threshold value of 0.30 (Field, 2009).

The following table (Table 5.18 on page 255) summarises the indicators and tests as well as the according threshold values that were applied in the exploratory factor analysis (EFA).

Table 5.18 – Indicators and Threshold Values for EFA

Indicator / Test	Threshold Value^b	Sources
Correlations in R-matrix	> 0.30	Field (2009:678), Tabachnick and Fidell (2007:614)
Determinant	> 0.00001	Field (2009:657)
KMO ^a statistic	> 0.50 ^c	Field (2009:659), Hair et al (2007:114-115), Kaiser (1974)
KMO ^a values for individual items	> 0.50	Field (2009:659), Hair et al (2007:115), Kaiser (1974)
Bartlett's Test of Sphericity (<i>p</i>)	< 0.05	Field (2009:660), Hair et al (2007:115)
Latent Root Criterion (Eigenvalue)	> 1	Field (2009:640), Hair et al (2007:120), Kaiser (1960)
Scree Plot	<i>Visual Assessment</i>	Cattell (1966), Field (2009:639), Hair et al (2007:120), Kinnear and Gray (2010:593)
Factor Loadings	> ±0.50	Hair et al (2007:128)
Cross-Loadings	< ±0.50	Hair et al (2007:130)
Communalities	> 0.50	Hair et al (2007:131)
Cronbach Alpha	> 0.70	Bryman and Cramer (2011:259), Field (2009:679), Hair et al (2007:137), Nunnally (1967), Nunnally and Bernstein (1994)
Item-Total-Correlation	> 0.30	Field (2009:678)

^a Kaiser-Meyer-Olkin measure of sampling adequacy

^b Threshold values suggest retaining of items

^c KMO statistic values categories: 0.5-0.7 = mediocre, 0.7-0.8 = good, 0.8-0.9 = great, > 0.9 = superb (Field, 2009; Hair et al, 2007; Kaiser, 1974)

5.4.2.1. Exploratory Factor Analysis – Group 1

For the first group that includes the three constructs FWTH, INNOVAD and MKTCOMP the correlation matrix was examined in a first step. Results show that all variables correlated acceptably well but not perfectly, which is preferable when conducting exploratory factor analysis (Tabachnick and Fidell, 2007). While there was a sufficient number of variables with correlations greater than 0.30, no value

above 0.90 was found. Next, the value of the determinant of the correlation matrix was 0.004 which is greater than 0.00001, thus indicating that multicollinearity was not a problem (Field, 2009). Then, results from Kaiser-Meyer-Olkin measure of sampling adequacy (KMO) and Bartlett's Test of Sphericity (BTS) were examined to test whether factor analysis is appropriate. KMO statistics was 0.682 which is well above the minimum of 0.50 (Field, 2009; Hair et al, 2007; Kaiser, 1974). In addition, KMO values for individual items as presented in the Anti-Image Correlation Matrix were examined. Results showed that except for item INNOVAD1 (0.431), all other variables showed values greater than the threshold value of 0.50 (Field, 2009; Hair et al, 2007; Kaiser, 1974). Next, Bartlett's Test of Sphericity was significant ($p < 0.001$) which indicated that the correlation matrix is not an identity matrix (Field, 2009; Hair et al, 2007).

As a result of the first run of EFA, four factors were extracted based on the latent root criterion (eigenvalue). The scree plot was slightly ambiguous although showing points of inflection that would justify the extraction of four factors, which would confirm the result based on the latent root criterion. Next, for all items factor loadings were above 0.50 on at least one factor. However, item INNOVAD1 did not load on factor two, as did the other four items of this scale, but loaded on factor four instead (0.858). In addition this item had individual KMO values below 0.50 (0.431). Item INNOVAD2 cross-loaded on factor two (0.558) and on factor four (0.545). Additionally, item MKTCOMP3 significantly loaded on factor three (0.507) as did the other three items of this scale, but also highly cross-loaded on factor four (0.624). Finally, examination of communalities showed that nearly all variables had values greater than 0.50 (Hair et al, 2007), except for item INNOVAD3 (0.324).

Based on the presented results of the first round of EFA, in a next step item INNOVAD1 and INNOVAD2 were dropped and a second round of EFA was performed. As a result of the second EFA a three factors structure was suggested and all relevant values (i.e. KMO statistic, KMO for individual items, BTS, factor loadings, communalities) showed acceptable levels with one single exemption. That is, item INNOVAD3 still showed communalities below 0.50 (0.333).

Consequently, item INNOVAD3 was dropped and a final round of EFA was performed. As a result, a clear three factors structure was suggested, Kaiser-Meyer-Olkin measure of sampling adequacy (KMO) and Bartlett's Test of Sphericity (BTS) showed good values (KMS statistic = 0.766; BTS $p < 0.001$) and KMO values for all individual items showed values well above 0.50. Moreover, all factor loadings had significant values ranging from 0.676 (MKTCOMP1) to 0.921 (FWTH2), no significant cross-loadings were detected and all communalities exceeded the 0.50 threshold value. Finally, Cronbach alpha values for all three scales showed acceptable values (FWTH: 0.895, INNOVAD: 0.730, MKTCOMP: 0.709) and all values for item-total correlations also were satisfactory. As a result of the final EFA for the first group the following factors were labelled for subsequent analysis as Forward Thinking (FWTH), Innovation Adoption (INNOVAD) and Market Competition (MKTCOMP).

5.4.2.2. Exploratory Factor Analysis – Group 2

For the second group that includes the two constructs IMGDIFF and INTCOM the correlation matrix was examined first. All variables correlated on an acceptable level without showing undesired extreme correlation. That is, numerous variables with correlations greater than 0.30 but no values above 0.90 were detected. Next, the determinant of the correlation matrix was 0.01 which exceeds the threshold value of 0.00001, indicating the absence of multicollinearity (Field, 2009).

In a next step Kaiser-Meyer-Olkin measure of sampling adequacy (KMO) and Bartlett's Test of Sphericity (BTS) were examined. Firstly, KMO statistics was 0.772, thus exceeding the required minimum of 0.50 (Field, 2009; Hair et al, 2007; Kaiser, 1974). In addition, KMO values for individual items were examined and all items had values exceeding the minimum value of 0.50 (Field, 2009; Hair et al, 2007; Kaiser, 1974). Secondly, Bartlett's Test of Sphericity was inspected and was found to be significant with $p < 0.001$, thus suggesting that the correlation matrix is not an identity matrix (Field, 2009; Hair et al, 2007).

As a result of the first run of the EFA, two factors were extracted based on the latent root criterion (eigenvalue) that was supported by the examination of the scree plot. Next, each item highly loaded on only one factor with all factor loadings exceeding the 0.50 threshold level. Finally, all communalities were greater than 0.50 (Hair et al, 2007) except for item IMGDIFF1 (0.415) and INTCOM 1 (0.397).

Based on the low communalities of IMGDIFF1 and INTCOM1 these two items were dropped and a second round of EFA was performed. As a result of this EFA the two factors structure was confirmed, Kaiser-Meyer-Olkin measure of sampling adequacy (KMO) and Bartlett's Test of Sphericity (BTS) showed good values (KMS statistic = 0.731; BTS $p < 0.001$) and KMO values for all individual items showed values well above 0.50. Moreover, all factor loadings had significant values ranging from 0.790 (IMGDIFF2) to 0.935 (INTCOM3), no significant cross-loadings were detected and all communalities exceeded the 0.50 threshold value. Finally, Cronbach alpha values for both scales showed acceptable levels (IMGDIFF: 0.845, INTCOM: 0.914) and values for item-total correlations also were satisfactory. Based on the final EFA, the two extracted factors were labelled Image Differentiation (IMGDIFF) and Integrated Communication (INTCOM).

5.4.2.3. Exploratory Factor Analysis – Group 3

Finally, the third group including the three constructs CVIM, CAIM and CEODRF was examined. Firstly, the correlation matrix was examined, showing that there was an acceptable level of correlation with a sufficient number of variables with correlations greater than 0.30.

However, four items showed significantly high correlation coefficients above 0.90. Firstly, item CEODRF3 and CEODRF4 were highly correlated (0.901), as already indicated in Section 5.3.5 on page 243 when independent variables were examined for multicollinearity. In addition, the correlation matrix indicated a strong correlation

between the two items CAIM1 and CAIM2 (0.927) of the scale measuring the endogenous construct (Corporate Auditory Identity Management).¹

Next, the value of the determinant of the correlation matrix was examined. IBM SPSS 19 produced a value of 0.000, thus generally indicating that multicollinearity might be a problem (Field, 2009). However, for principal component analysis (PCA), which was used in this research, multicollinearity is not problematic (Field, 2009; Tabachnick and Fidell, 2007). Subsequently, Kaiser-Meyer-Olkin measure of sampling adequacy (KMO) and Bartlett's Test of Sphericity (BTS) were performed. KMO statistics was 0.836 and thus well above 0.50 (Field, 2009; Hair et al, 2007; Kaiser, 1974). In addition, KMO values for individual items were examined and all values exceeded the threshold value of 0.50 (Field, 2009; Hair et al, 2007; Kaiser, 1974). Finally, Bartlett's Test of Sphericity was significant with $p < 0.001$, confirming that the correlation matrix was not an identity matrix (Field, 2009; Hair et al, 2007).

As a result of the first run of the EFA, a three factors structure was suggested based on the latent root criterion. This was also supported by the visual examination of the scree plot. All items had factor loadings exceeding the 0.50 threshold level. However, item CEODRF1 did not load perfectly clear on one single factor but loaded on factor one (0.415) as well as slightly stronger on factor two (0.551). Finally, communalities for all items were greater than 0.50 except for CEODRF1 (0.487) (Hair et al, 2007).

Based on the presented results of the first round of EFA, in a next step item CEODRF1 was dropped due to cross-loading and low communalities and a second round of CFA was performed. As a result of this EFA the three factors structure was confirmed, Kaiser-Meyer-Olkin measure of sampling adequacy (KMO) and Bartlett's Test of Sphericity (BTS) showed good values (KMS statistic = 0.831; BTS $p < 0.001$) and KMO values for all individual items showed values well above 0.50. Moreover, all factor loadings had significant values ranging from 0.766 (CVIM5) to

¹ The five items measuring the endogenous construct CAIM (i.e. item CAIM1 - CAIM5) were not included in the test of multicollinearity of independent variables.

0.897 (CAIM1), no significant cross-loadings were detected and all communalities exceeded the 0.50 threshold value. Finally, Cronbach alpha values for all three scales showed good values (CVIM: 0.899, CAIM: 0.936 and CEODRF: 0.929). In addition, all values for item-total correlations had satisfactory levels. Subsequently, the three extracted factors were named for subsequent analysis as Corporate Visual Identity Management (CVIM), Corporate Auditory Identity Management (CAIM) and CEO Driving Force (CEODRF).

In the following, two tables are presented. The first table (Table 5.19 on page 260) summarises items that were dropped as a result of exploratory factor analysis. The second table (Table 5.20 on page 261) then provides the final factor structure and scales resulting from exploratory factor analysis (EFA).

Table 5.19 – Items Dropped Based on Exploratory Factor Analysis (EFA)

Group	Construct	Item Dropped	Reason for Dropping of Item
Group 1	Innovation Adoption	INNOVAD1	Loaded on unexpected factor Low individ. KMO value (< 0.5)
		INNOVAD2 ^a	Sign. cross-loadings (> ±0.5)
		INNOVAD3 ^a	Low communalities (< 0.5)
Group 2	Image Differentiation	IMGDIFF1	Low communalities (< 0.5)
	Integrated Communication	INTCOM1	Low communalities (< 0.5)
Group 3	CEO Driving Force	CEODRF1 ^a	Sign. cross-loadings (> ±0.5) Low communalities (> 0.50)

^a Negatively worded items have been recoded.

Table 5.20 – Factors and Scales Resulting from EFA

Factor / Construct	Cronbach's Alpha	Item	Corrected Item-Total Correlation	Factor Loading
Forward Thinking (FWTH)	0.895	FWTH1	0.760	0.846
		FWTH2	0.849	0.921
		FWTH3	0.783	0.898
		FWTH4	0.687	0.791
Innovation Adoption (INNOVAD)	0.730	INNOVAD4	0.575	0.836
		INNOVAD5 ^a	0.575	0.837
Market Competition (MKTCOMP)	0.709	MKTCOMP1	0.472	0.676
		MKTCOMP2	0.595	0.809
		MKTCOMP3	0.416	0.689
		MKTCOMP4	0.565	0.767
Image Differentiation (IMGDIFF)	0.845	IMGDIFF2	0.718	0.888
		IMGDIFF3	0.676	0.790
		IMGDIFF4	0.746	0.908
Integrated Communication (INTCOM)	0.914	INTCOM2	0.847	0.921
		INTCOM3	0.861	0.935
		INTCOM4	0.780	0.892
CVI Management (CVIM)	0.899	CVIM1	0.758	0.858
		CVIM2	0.694	0.795
		CVIM3	0.816	0.885
		CVIM4	0.839	0.887
		CVIM5	0.652	0.766
CAI Management (CAIM)	0.936	CAIM1	0.865	0.897
		CAIM2	0.869	0.888
		CAIM3	0.875	0.846
		CAIM4	0.846	0.807
		CAIM5	0.719	0.827
CEO Driving Force (CEODRF)	0.929	CEODRF2	0.712	0.815
		CEODRF3	0.887	0.891
		CEODRF4	0.899	0.890
		CEODRF5	0.863	0.881

^a Negatively worded items have been recoded.

5.5 Assessment of Measurement Model (PLS-SEM)

5.5.1 Introduction

Following the examination of the factor structure using exploratory factor analysis (EFA) as described in the last chapter, in a next step the measurement model was assessed. Owing to the small sample size and non-normal distributed data in this research, PLS-SEM (i.e. Partial Least Squares Structural Equation Modelling) rather than traditional CB-SEM (i.e. Covariance Based Structural Equation Modelling) was used for the assessment of the measurement model and the structural model.

Even though PLS is a more recent SEM technique in comparison to CB-SEM, PLS-SEM has been adopted by a growing number of researchers from a variety of disciplines such as strategic management, management information system, organisational behaviour, marketing and consumer behaviour which led to publications in numerous top-tier journals such as *Strategic Management Journal*, *European Journal of Marketing*, *Management Science*, *Journal of International Business Studies*, *Journal of Product Innovation Management*, *International Marketing Review*, *Journal of Business Research*, and *Journal of the Academy of Marketing Science* (Hair et al, 2011b; Henseler et al, 2009).

While traditional Covariance-Based SEM estimate path coefficients and loadings by minimizing the difference between observed and predicted variance-covariance matrices, PLS-SEM is a component-based Structural Equation Modelling technique that estimates parameters similar to the principal component with a multiple regression approach (Chin and Newsted, 1999; Haenlein and Kaplan, 2004; Hsu et al, 2006).

PLS-SEM has been widely recognised to offer a number of advantages in comparison to CB-SEM. Firstly, PLS-SEM works well for models that include elements that offer limited theoretical foundation (Ringle et al, 2006), are more prediction-oriented and aim for explanation of endogenous constructs (Henseler et al, 2009).

Secondly, while CB-SEM is very sensitive to violation of the assumption of normal distribution, PLS-SEM has shown to be less restrictive regarding assumptions of distribution (Chin et al, 2003; Haenlein and Kaplan, 2004; Hair et al, 2011b; Ringle et al, 2006). In particular, Haenlein and Kaplan (2004) refer to the fact that PLS-SEM is fairly robust not only with regard to multicollinearity but also skewness. Hence, PLS-SEM can be used in cases where other techniques such as CB-SEM are not applicable.

Thirdly, in PLS-SEM reflective as well as formative measurement models can be easily used, while using formative models in CB-SEM “*requires accounting for relatively complex and limiting specification rules*” (Hair et al, 2011a:144).

Fourthly, in contrast to CB-SEM, PLS-SEM allows to measure constructs that have a narrow scope, are unidimensional and are unambiguous for respondents (Hair et al, 2011b), with fewer items and even single-item scales due to its less restrictive measurement properties (Hair et al, 2011a; Hair et al, 2011b).

Fifthly, PLS-SEM has been widely acknowledged to produce reliable estimates with considerably smaller sample sizes in comparison to CB-SEM (Deal, 2006; Haenlein and Kaplan, 2004; Hair et al, 2011a; Henseler et al, 2009; Hsu et al, 2006; Lee, 2001; Ringle et al, 2006; Tenenhaus et al, 2005). According to Haenlein and Kaplan (2004), referring to a Monte Carlo simulation performed by Chin and Newsted (1999), PLS-SEM can be applied to sample sizes as low as 50, conditional on specific statistical power levels. In addition, Tenenhaus et al (2005:202) more specifically argue that in the case of PLS-SEM “*there can be more variables than observations and there may be a small amount of data that are missing completely at random*”. However, Hair et al (2011a:144) recommend a minimum samples size in cases of reflective measurement model of “*ten times the largest number of structural paths directed at a particular latent construct in the structural model*”.

With regard to this research, several of the above mentioned advantages of PLS-SEM are relevant and have led to the decision to apply PLS-SEM instead of CB-SEM. Firstly, initial data examination as described in Section 5.3 has revealed some

skewness in the data. Moreover, the focal construct of this research (i.e. corporate auditory identity management) so far has not been conceptualised or operationalised as a constituent for example of corporate identity management or corporate communication. Thus, with only limited theoretical foundation available with regard to the focal construct, some portion of explanation regarding endogenous constructs is inherent in this research. Finally and most relevant, based on the small sample size available in this research traditional CB-SEM was not an option. However, the sample size of 84 was sufficient to satisfy the recommendation by Hair et al (2011a) mentioned above. Based on these rationale, PLS-SEM was considered as an ideal statistical technique and thus was employed for the assessment of the measurement and structural model.

Traditional CB-SEM techniques differentiate between the measurement model and the structural model. While the measurement model refers to the relation between observable indicator variables and the latent variables (factors), the structural model represents the path relations between exogenous and endogenous latent variables (Anderson and Gerbing, 1988; Tabachnick and Fidell, 2007). PLS-SEM basically follows this approach and differentiates between the outer model (i.e. measurement model) and the inner model (i.e. structural model) (Deal, 2006; Hair et al, 2011a; Henseler et al, 2009; Ringle et al, 2006).

Furthermore, similar to the widely adopted two-step approach for covariance-based SEM as suggested by Anderson and Gerbing (1988; 1982), PLS-SEM also follows a sequential two-step approach (Deal, 2006; Hair et al, 2011a). The assessment of a PLS-SEM path model commences by the estimation of the outer model (i.e. measurement model) in terms of reliability and construct validity (i.e. convergent and discriminant validity), followed by the assessment of the path relations of the inner model (i.e. structural model) (Deal, 2006; Henseler et al, 2009).

5.5.2 Reliability and Validity Assessment

The assessment of a measurement model in CB-SEM, i.e. to test whether the model is valid, basically includes the examination of Goodness-of-Fit (GOF) indices as well

as construct validity (Hair et al, 2007). Goodness-of-Fit indices indicate the degree to which “*the specified model reproduces the covariance matrix among the indicator items (i.e. the similarity of the observed and estimated covariance matrices)*” (Hair et al, 2007:745). Numerous absolute, incremental and parsimony fit indices are available, such as the χ^2 value and the χ^2/df value, GFI, CFI, TLI, RMSEA, RMR and AGFI to name just some of the most prominent and frequently reported indices (Anderson and Gerbing, 1984; Hair et al, 2007; Stevens, 1996).

Even though no such global measure of goodness-of-fit is available for PLS-SEM (Hair et al, 2011a; Hair et al, 2011b; Henseler et al, 2009; Hsu et al, 2006), a catalogue of criteria for assessing the outer model (i.e. measurement model) with regard to reliability and construct validity has been developed (Henseler et al, 2009).

Firstly, internal consistency reliability is assessed by examining composite reliability values that should not be lower than 0.60 (Henseler et al, 2009) but rather should exceed 0.70 (Hair et al, 2011a; Ringle et al, 2006). In addition, standardised outer factor loadings are examined and should exceed 0.70, which indicates adequate indicator reliability (Hair et al, 2011a; Henseler et al, 2009; Ringle et al, 2006).

In addition, convergent validity is examined, which refers to the fact that “*a set of indicators represents one and the same underlying construct, which can be demonstrated through their unidimensionality*” (Henseler et al, 2009:299). In order to test for convergent validity, the average variance extracted (AVE) is used as a criterion (Fornell and Larcker, 1981) with values greater than 0.50 indicating adequate convergent validity (Hair et al, 2011a; Henseler et al, 2009; Ringle et al, 2006). An AVE value of 0.50 refers to the fact that half of the variance of the manifest variable is explained by the latent variable on average (Henseler et al, 2009).

Finally, discriminant validity is assessed, which refers to the extent to which measurement scale items are distinct from items of other conceptually distinct latent constructs (Churchill, 1979; Hair et al, 2007; Peter, 1981). When conducting PLS-SEM, two measures for discriminant validity have been put forward.

The first measure is the Fornell-Larcker Criterion (Fornell and Larcker, 1981) that refers to the condition where a latent variable shares more variance with its assigned indicators than with any other latent variable. In statistical terms this is assessed by examining that the Average Variance Extracted (AVE) value of each latent construct should be higher than the construct's highest squared correlation with any other latent construct (Hair et al, 2011a; Henseler et al, 2009).

The second criterion that is used to test for discriminant validity in PLS-SEM investigates the factor loadings and cross-loadings. In detail, discriminant validity is indicated if the loading of each indicator on its associated factor is higher than its cross-loadings (Hair et al, 2011a; Henseler et al, 2009). While the Fornell-Larcker Criterion assesses discriminant validity on the construct level, the cross-loadings criterion assesses discriminant validity on the indicator level (Henseler et al, 2009).

The following table (Table 5.21) summarises the measures and threshold values applied in this research for testing the outer model with regard to reliability and construct validity.

Table 5.21 – Measures and Threshold Values for Assessment of Outer Model

Assessment Subject	Measure	Threshold Value
Internal Consistency Reliability	Composite Reliability	> 0.7
Indicator Reliability	Factor Loadings	> 0.7
Convergent Validity	Average Variance Extracted (AVE)	> 0.5
Discriminant Validity	Fornell-Larcker Criterion	–
Discriminant Validity	Loading – Cross-loadings Comparison	–

Note: Based on Bagozzi and Yi (1988), Hair et al (2011a), Henseler et al (2009) and Ringle et al (2006)

5.5.3 Results of Reliability and Validity Assessment

The following section presents the results of the assessment of the measurement model using the SmartPLS 2.0 software package (Ringle et al, 2005).¹ Firstly, composite reliability values for all latent variables were examined. Results show that all values were above the suggested threshold value of 0.70 (Hair et al, 2011a; Henseler et al, 2009; Ringle et al, 2006). The following table (Table 5.22) depicts all composite reliability values.

Table 5.22 – Composite Reliability Values

Construct	Composite Reliability
FWTH	0.93
INNOVAD	0.86
MKTCOMP	0.81
IMGDIFF	0.90
INTCOM	0.95
CVIM	0.92
CAIM	0.95
CEODRF	0.95

Note: Constructs related to the proposed consequences (CONSQ1-CONSQ10) were conceptualised to be measured as single-item scales, thus resulting in a composite reliability value of 1.

Next, the outer factor loadings were examined. Results show that except for MKTCOMP1 (0.67) and MKTCOMP3 (0.44) all values exceed the suggested threshold value of 0.70 (Hair et al, 2011a; Henseler et al, 2009; Ringle et al, 2006). Even though factor loadings for MKTCOMP1 and MKTCOMP3 did not meet the threshold value, according to Hair et al (2011a) items that do not meet the suggested

¹ The following settings were used for performing PLS-SEM using SmartPLS 2.0. Weighting Scheme: Path Weighting Scheme (Even though all three available weighting schemes (i.e. centroid, path and factor weighting scheme) was argued to produce similar results (Haenlein and Kaplan, 2004), the path weighting scheme has been selected as recommended by Hair et al (2011a)); Data Metric: Mean 0, Var 1 (default setting); Maximum Iterations: 300 (default setting), Abort Criterion: 1.0E-5 (default setting and recommended by Hair et al (2011a)); Initial Weights: 1.0 (default setting).

threshold value should be retained if the composite reliability of the associated factor is satisfying above the threshold value of 0.70. Similarly, Henseler et al (2009:299) argue that “*only if an indicator’s reliability is low and eliminating this indicator goes along with a substantial increase of composite reliability, it makes sense to discard this indicator*”. Consequently, since the composite reliability value for MKTCOMP is 0.81, thus being well above the threshold value of 0.70, the two items MKTCOMP1 and MKTCOMP3 were retained for further analysis. A table including all outer factor loadings is provided in Appendix 14 on page 384.

In a next step, convergent validity was assessed by examining Average Variance Extracted (AVE) values. Results show that all relevant AVE values exceed the threshold value of 0.50 (Hair et al, 2011a; Henseler et al, 2009; Ringle et al, 2006), thus convergent validity was established. The following table (Table 5.23) summarises the AVE values.

Table 5.23 – Average Variance Extracted (AVE) Values

Construct	AVE Value
FWTH	0.76
INNOVAD	0.76
MKTCOMP	0.52
IMGDIFF	0.76
INTCOM	0.85
CVIM	0.71
CAIM	0.80
CEODRF	0.83

Note: Constructs related to the proposed consequences (CONSQ1-CONSQ10) were conceptualised to be measured as single-item scales, thus resulting in AVE values of 1.

After establishing convergent validity, discriminant validity was assessed based on the Fornell-Larcker criterion as described earlier. Results show that for all constructs AVE values were higher than the construct’s highest squared correlation with any other latent construct. Consequently, discriminant validity on the construct level was

established (Henseler et al, 2009). A table including all squared latent variable correlations can be found in Appendix 15 on page 385.

Finally, in order to establish discriminant validity on the indicator level (Henseler et al, 2009), cross-loadings were inspected. Results show that loadings of each of the indicator on its associated factor were higher than any of its cross-loadings. Consequently, discriminant validity was established. A table including all cross-loadings is presented in Appendix 16 on page 386.

Following the positive assessment of the outer model (i.e. measurement model), that is, all latent variable scores of the outer path model showing adequate evidence of reliability and validity, in a next step the inner model (i.e. structural model) was estimated, which is outlined in the next section.

5.6 Assessment of Structural Model (PLS-SEM)

5.6.1 Introduction

Subsequent to the examination of the outer model in terms of reliability and validity, the inner model (i.e. structural model) was assessed. Key criteria for the assessment of the inner model are the coefficient of determination (R^2), estimates of path coefficient and prediction relevance (Q^2) (Hair et al, 2011a; Henseler et al, 2009; Hsu et al, 2006; Ringle et al, 2006; Ringle and Spreen, 2007). The following table (Table 5.24) summarises the measures and threshold values applied in this research for testing the inner model in PLS-SEM.

Table 5.24 – Measures and Threshold Values for Assessment of Inner Model

Assessment Subject	Measure	Threshold Value
Coefficient of Determination	R^2	0.19 (weak), 0.33 (mediocre), 0.67 (good)
Path Coefficient	t -value	1.65 ($p < 0.10$), 1.96 ($p < 0.05$), 2.58 ($p < 0.01$)
Predictive Relevance	Q^2	0.02 (small), 0.15 (medium), 0.35 (strong)

Note: Based on Chin (1998), Cohen (1988), Hair et al (2011a), Henseler et al (2009) and Ringle et al (2006)

5.6.2 Results from Assessment of Structural Model

The first criterion that was examined is the coefficient of determination (R^2) of endogenous latent variables (Henseler et al, 2009). According to Chin (1998) values of 0.19, 0.33 and 0.67 indicate weak, mediocre and good R^2 values, respectively.

Results show that for CONSQ6, CONSQ7, CONSQ8 and CONSQ10 values were below the level of 0.19 (weak). For CONSQ1, CONSQ2, CONSQ3, CONSQ4, CONSQ5 and CONSQ9 values were just above or slightly below the level of 0.19. In contrast, the R^2 value for CAIM (0.40) was mediocre. Overall, based on the coefficient of determination (R^2) of the endogenous latent variables it can be concluded that particularly with regard to the consequences the model does not predict future outcomes very well. The following table (Table 5.25) summarises the coefficient of determination (R^2) values.

Table 5.25 – Coefficients of Determination (R^2)

Construct	R^2
CAIM	0.40
CONSQ1	0.16
CONSQ2	0.21
CONSQ3	0.15
CONSQ4	0.11
CONSQ5	0.11
CONSQ6	0.07
CONSQ7	0.06
CONSQ8	0.08
CONSQ9	0.15
CONSQ10	0.08

In a next step, the confidence intervals of the path coefficient were determined, by means of a bootstrapping procedure. The bootstrapping procedure “*involves repeated random sampling with replacement from the original sample to create a bootstrap sample, to obtain standard errors for hypothesis testing*” (Hair et al, 2011a:148). Based on the bootstrap sample, the estimated coefficients then can be estimated in PLS-SEM for their significance (Hair et al, 2011a).

The following settings for the bootstrap procedure in SmartPLS 2.0 were used. Firstly, the number of cases was set to the number of original cases available in the data set ($n = 84$) (Hair et al, 2011a). Next, the number of bootstrap samples was set to 5,000 as suggested by Hair et al (2011a), Ringle et al (2006) and Henseler et al (2009). Finally, with regard to the option of sign changes that is available in SmartPLS 2.0 when producing bootstrap samples, ‘construct level changes’ was selected based on the recommendation by Tenenhaus et al (2005:183) arguing that “*bootstrap with the default construct level changes option seems to be the most valid procedure among the existing ones*”.

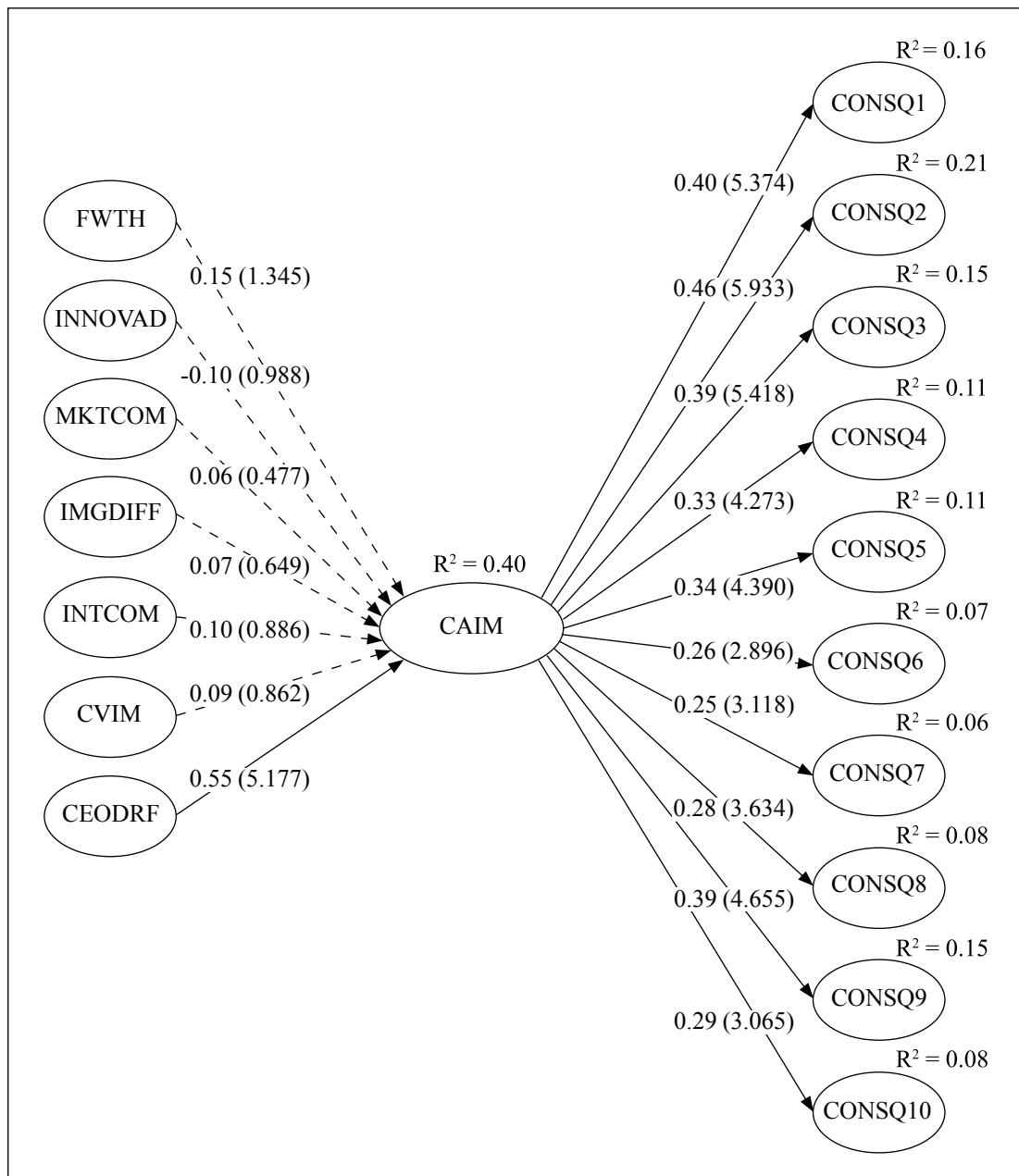
Based on a significance level of $p < 0.01$, results show that all path coefficients from the focal construct to the ten hypothesised consequences were significant. Also the path from the exogenous construct CEODRF to the endogenous construct CAIM was significant. However, paths from the remaining exogenous constructs to the endogenous focal construct CAIM were not significant. The following table (Table 5.26 on page 272) presents the path coefficients, t -statistics and p -values. The validated structural model is presented in Figure 5.1 on page 273.

Table 5.26 – Results of Path Coefficients

Path	Hypothesis	Path Coefficient	Std. Error	t-Statistic	p-Value
FWTH → CAIM	H1 (+)	0.15	0.1135	1.345	0.179
INNOVAD → CAIM	H2 (+)	-0.10	0.1038	0.988	0.323
MKTCOMP → CAIM	H3 (+)	0.06	0.1250	0.477	0.633
IMGDIFF → CAIM	H4 (+)	0.07	0.1074	0.649	0.516
INTCOM → CAIM	H5 (+)	0.10	0.1142	0.886	0.376
CVIM → CAIM	H6 (+)	0.09	0.1086	0.862	0.389
CEODRF → CAIM	H7 (+)	0.55	0.1053	5.177	0.000*
CAIM → CONSQ1	H8 (+)	0.40	0.0735	5.374	0.000*
CAIM → CONSQ2	H9 (+)	0.46	0.0767	5.933	0.000*
CAIM → CONSQ3	H10 (+)	0.39	0.0723	5.418	0.000*
CAIM → CONSQ4	H11 (+)	0.33	0.0774	4.273	0.000*
CAIM → CONSQ5	H12 (+)	0.34	0.0764	4.390	0.000*
CAIM → CONSQ6	H13 (+)	0.26	0.0901	2.896	0.004*
CAIM → CONSQ7	H14 (+)	0.25	0.0817	3.118	0.002*
CAIM → CONSQ8	H15 (+)	0.28	0.0784	3.634	0.000*
CAIM → CONSQ9	H16 (+)	0.39	0.0838	4.655	0.000*
CAIM → CONSQ10	H17 (+)	0.29	0.0942	3.065	0.002*

Note: Degrees of freedom = 5000; * Significant at $p < 0.01$

Figure 5.1 – Validated Structural Model



Note: Degrees of freedom = 5000; Values indicate path coefficients; Values in parentheses indicate *t*-values; Solid lines indicate significant relationships ($p < 0.01$); Dotted lines indicate non-significant relationships ($p > 0.01$).

Finally, predictive relevance was examined as the final criterion of the assessment of the structural model. Predictive relevance, which can be measured by the Stone-Geisser criterion Q^2 refers to whether the model is able to predict the endogenous latent constructs' indicators (Hair et al, 2011a; Henseler et al, 2009; Tenenhaus et al, 2005). In order to obtain Q^2 values, a blindfolding procedure, which is a sample reuse technique (Henseler et al, 2009; Ringle and Spreen, 2007) was applied in SmartPLS 2.0 (Hair et al, 2011a).

Q^2 values can refer to either cross-validated redundancy or cross-validated communality (Hair et al, 2011a; Henseler et al, 2009). In contrast to cross-validated communality, cross-validated redundancy “uses the PLS-SEM estimates of both the structural model and the measurement models for data prediction and, thereby, perfectly fits the PLS-SEM approach” (Hair et al, 2011a:147). Following the suggestion by Wold (1982) and Hair et al (2011a), Q^2 values in form of an endogenous construct's cross-validated redundancy measure were used. Q^2 values for a particular endogenous latent variable larger than zero indicate that the latent constructs that explain the endogenous latent construct have predictive relevance (Hair et al, 2011a; Henseler et al, 2009; Ringle et al, 2006; Ringle and Spreen, 2007).

Furthermore, when performing the blindfolding procedure, the omission distance (D) should be between 5 and 10 and the number of cases must not be a multiple integer of D (Hair et al, 2011a; Ringle and Spreen, 2007). Based on this guideline, the blindfolding procedure was performed with an omission distance of 8 (with 84 cases). Results show that all Q^2 values were larger than zero, thus indicating predictive relevance. The following table (Table 5.27 on page 275) presents the predictive relevance Q^2 values.

Table 5.27 – Predictive Relevance (Q^2) Values

Construct	SSO^a	SSE^b	Q^2 Values^c
CAIM	420.000000	328.155623	0.218677
CONSQ1	84.000000	76.160563	0.093327
CONSQ2	84.000000	73.030631	0.130588
CONSQ3	84.000000	73.350577	0.126779
CONSQ4	84.000000	79.065361	0.058746
CONSQ5	84.000000	76.034864	0.094823
CONSQ6	84.000000	81.186238	0.033497
CONSQ7	84.000000	79.136912	0.057894
CONSQ8	84.000000	80.520592	0.041422
CONSQ9	84.000000	74.756198	0.110045
CONSQ10	84.000000	78.565670	0.064694

^a Sum of Squares of Observations

^b Sum of Squares of Prediction Errors

^c Q^2 values calculated as $1 - SSE/SSO$ (Ringle and Spreen, 2007:215)

5.6.3 Results of Hypotheses Testing

With regard to H1, results show that no significant relation between Forward Thinking (FWTH) and Corporate Auditory Identity Management (CAIM) was found ($t = 1.345$; $p < 0.01$). With regard to H2, no significant positive effect was found between Innovation Adoption (INNOVAD) and Corporate Auditory Identity Management (CAIM) ($t = 0.988$; $p < 0.01$). With regard to H3, results show no evidence for a significant relation between Market Competition (MKTCOMP) and Corporate Auditory Identity Management (CAIM) ($t = 0.477$; $p < 0.01$). Similarly, results regarding H4 show no evidence for a significant relation between Image Differentiation (IMGIFF) and Corporate Auditory Identity Management (CAIM) ($t = 0.649$; $p < 0.01$). With regard to H5, no significant relation between Integrated Communication (INTCOM) and Corporate Auditory Identity Management (CAIM) was identified ($t = 0.886$; $p < 0.01$). Likewise, results regarding H6 show no significant relation between Corporate Visual Identity Management (CVIM) and Corporate Auditory Identity Management (CAIM) ($t = 0.862$; $p < 0.01$). With regard

to H7, results show that the role of the CEO as Driving Force (CEODR) has a positive effect on Corporate Auditory Identity Management (CAIM) ($t = 5.177$; $p < 0.01$).

Next, with regard to H8 - H17, results show evidence for a significant relation between Corporate Auditory Identity Management (CAIM) and all of the ten proposed consequences (CONSQ1-CONSQ10) in the conceptual framework, which were defined as perceived consequence of corporate auditory identity management. In detail, there was evidence for a significant relation of Corporate Auditory Identity Management (CAIM) and Gaining Differentiation (CONSQ1) ($t = 5.374$; $p < 0.01$), Gaining Competitive Advantage (CONSQ2) ($t = 5.933$; $p < 0.01$), Improving Corporate Image (CONSQ3) ($t = 5.418$; $p < 0.01$), Supporting Corporate Communication (CONSQ4) ($t = 4.273$; $p < 0.01$), Supporting Consistent Corporate Communication (CONSQ5) ($t = 4.390$; $p < 0.01$), Strengthening Identification of Employees with the Organisation (CONSQ6) ($t = 2.896$; $p < 0.01$), Increasing Recognisability (CONSQ7) ($t = 3.118$; $p < 0.01$), Increasing Familiarity (CONSQ8) ($t = 3.634$; $p < 0.01$), Generating Trust (CONSQ9) ($t = 4.655$; $p < 0.01$), Influencing Buying Behaviour (CONSQ10) ($t = 3.065$; $p < 0.01$). Consequently, H8, H9, H10, H11, H12, H13, H14, H15, H16 and H17 were supported. The following table (Table 5.28 on page 277) summarises the results of the testing of hypotheses.

Table 5.28 – Results of Hypotheses Testing

Hypothesis		Result
H1 (+)	Being a forward thinking organisation is positively related to a higher degree of corporate auditory identity management.	Not supported
H2 (+)	Organisational innovation adoption is positively related to a higher degree of corporate auditory identity management.	Not supported
H3 (+)	Companies that operate in a highly competitive market are more likely to have a higher degree of corporate auditory identity management.	Not supported
H4 (+)	Companies that follow a differentiation strategy based on image are more likely to have a higher degree of corporate auditory identity management.	Not supported
H5 (+)	Companies that emphasise integrated communication are more likely to have a higher degree of corporate auditory identity management.	Not supported
H6 (+)	Corporate visual identity management is positively related to a higher degree of corporate auditory identity management.	Not supported
H7 (+)	The role of the chief executive officer as internal driving force is positively related to a higher degree of corporate auditory identity management.	Supported
H8 (+)	Companies with a high degree of corporate auditory identity management are more likely to perceive 'gaining differentiation' as a positive outcome.	Supported
H9 (+)	Companies with a high degree of corporate auditory identity management are more likely to perceive 'gaining competitive advantage' as a positive outcome.	Supported
H10 (+)	Companies with a high degree of corporate auditory identity management are more likely to perceive 'improving corporate image' as a positive outcome.	Supported
H11 (+)	Companies with a high degree of corporate auditory identity management are more likely to perceive 'supporting corporate communication' as a positive outcome.	Supported
H12 (+)	Companies with a high degree of corporate auditory identity management are more likely to perceive 'supporting consistent corporate communication' as a positive outcome.	Supported

H13 (+)	Companies with a high degree of corporate auditory identity management are more likely to perceive 'strengthening identification of employees with the organisation' as a positive outcome.	Supported
H14 (+)	Companies with a high degree of corporate auditory identity management are more likely to perceive 'increasing recognisability' as a positive outcome.	Supported
H15 (+)	Companies with a high degree of corporate auditory identity management are more likely to perceive 'increasing familiarity' as a positive outcome.	Supported
H16 (+)	Companies with a high degree of corporate auditory identity management are more likely to perceive 'generating trust' as a positive outcome.	Supported
H17 (+)	Companies with a high degree of corporate auditory identity management are more likely to perceive 'influencing buying behaviour' as a positive outcome.	Supported

5.6.4 Testing of Control Variables

In addition to the testing of the proposed linkages between exogenous and endogenous variables as illustrated in the structural model, three control variables were defined in this research, namely, company size, company type and identity structure (Please see Chapter 3).

Control variables basically are treated similar to other exogenous variables in a process model. However, in contrast to other variables in the framework, control variables are not in the focus of the research interest. Control variables are included into the model in order to assess whether the originally conceptualised exogenous variables account for any significant path relations rather than any of the control variables.

With regard to PLS-SEM, in order to test for effects of the three control variables on the focal construct (CAIM), the three control variables were included in the measurement model and linked to the corporate auditory identity management construct (CAIM). Next, the bootstrapping procedure in the SmartPLS 2.0 software package was applied with identical settings as for the testing of hypothesised path

relations of the structural model in the last section (Please see Section 5.6.2 on page 270).

Based on a significance level of $p < 0.01$, results show that no path from any of the three control variables (company size, company type, identity structure) to the focal construct (corporate auditory identity management) was significant. Thus, none of the control variables significantly accounts for the variance of the focal construct. The following table (Table 5.29) presents the results of the testing of control variables (Please see Appendix 17 on page 389 for an illustration of the measurement model including control variables).

Table 5.29 – Results of Testing of Control Variables

Path	Path Coefficient	Std. Error	t-Statistic	p-Value
COMPSIZE → CAIM	-0.06	0.0890	0.844	0.399
COMPTYPE → CAIM	-0.15	0.0979	1.547	0.122
IDSTR → CAIM	0.07	0.0829	0.821	0.412

Note: Degrees of freedom = 5000; COMPSIZE = Company Size; COMPTYPE = Company Type; IDSTR = Identity Structure.

In this chapter the statistical analysis of quantitative data was presented. In detail, sample characteristics were presented and initial data examination and data preparation were conducted. Next, scale simplification was performed by means of reliability assessment and exploratory factor analysis (EFA). Then, the measurement model as well as the structural model was assessed with PLS-SEM using the SmartPLS 2.0 software package. Subsequently, results from hypotheses testing based on the assessment of the structural model were reported. Finally, effects of control variables with regard to the focal construct (CAIM) were presented. In the next chapter results from quantitative analysis are discussed in more detail.

6. Results and Discussion

6.1 Introduction

In this research corporate auditory identity as an additional element of corporate identity management and corporate communication was investigated. Statistical results from the analysis of quantitative data were presented in the last chapter. This chapter starts by providing an overview of this study including key aims as well as research methods applied in this research. Next, findings with regard to scale development and hypotheses testing are discussed and reviewed with regard to theoretical expectations. Subsequently, findings regarding the focal construct, antecedents and perceived consequences of corporate auditory identity management are discussed.

6.2 Overview of the Study

The aim of this research was to investigate corporate auditory identity management as one constituent of the corporate identity mix alongside visual identity, thus widening the academic perspective and developing further knowledge in the corporate communication and corporate identity domain. More specifically, this research aimed to conceptualise the construct of corporate auditory identity management. In detail, the aim on a construct level was to identify factors that determine corporate auditory identity management at organisations as well as to operationalise corporate auditory identity management by developing reliable and valid measurement scales. In addition, this research aimed to develop and test a process model that explains determinants of corporate auditory identity management applied by an organisation and to investigate the consequences of corporate auditory identity management as perceived by the organisation. The proposed relationships ultimately resulted in seventeen hypotheses.

In order to achieve the aforementioned aims, methodological triangulation was applied, that is qualitative as well as quantitative data was collected (Denzin, 1989;

Easterby-Smith et al, 2002; Tashakkori and Teddlie, 1998). In the first stage, qualitative data from interviews with marketing and brand managers from multinational companies in the UK such as British Airways, Xerox, H.J. Heinz and Interbrand as well as experts in the field such as communication scholar David Bernstein and sound expert Daniel Jackson among others were collected. This data offered valuable insight into the underdeveloped domain of corporate sound and provided guidance for the development of measurement scales. Based on the literature review and findings from qualitative data, the researcher developed measurement scales for each of the relevant constructs that were tested for face validity and merged into a questionnaire as the main research instrument. Next, quantitative data was gathered in three stages, using a printed and a web-based version of the questionnaire. The collected quantitative data then was statistically examined by means of descriptive statistic methods and exploratory factor analysis (EFA). Finally, the outer and inner model (i.e. measurement and structural model) and hypotheses were tested using PLS-SEM (Partial Least Squares Structural Equation Modeling).

6.3 Measurement Scales

While some of the measurement scales in this research were adopted from existing scales, some scales were developed by the researcher since no existing scale was available in the literature. In particular, three scales, namely for measuring the construct Forward Thinking (FWTH), the focal construct Corporate Auditory identity Management (CAIM) and CEO as Driving Force (CEODRF) were largely developed by the researcher.

6.3.1 Forward Thinking (FWTH)

The construct Forward Thinking (FWTH) was conceptualised in this study as organisational characteristic of anticipating changes and developments, in contrast to the characteristic of being an innovative organisation. The conceptualisation of this construct was based on a notion by Van den Bosch et al (2006a:146) who argue that organisations that operate in a dynamic environment have to “*act flexibly and*

anticipate changes”. In detail, Van den Bosch et al (2006a:146; 2006b:874) have included the statement “*Our organization continually anticipates new developments*” as one reflective indicator for measuring the variable ‘open and dynamic’. The conceptualisation of Forward Thinking (FWTH) was also supported by qualitative findings. For instance, as one interviewee pointed out:

“As a general impression I’d say they’re the more professional and deeper thinking companies about the whole communication mix. [...] the deeper thinking companies tend to be more forward thinking as well.” [Corporate Reputation Consultant #1]

Accordingly, based on the literature as well as qualitative data, the researcher developed a scale for measuring the construct Forward Thinking (FWTH) that included eight items in a very first version (before testing for face validity) that was successively reduced to a four-item scale, which was finally tested for scale reliability. The scale showed a satisfying Cronbach alpha coefficient value of 0.895, thus indicating good internal consistency (Cronbach, 1951; Hair et al, 2007). Moreover, as the result of exploratory factor analysis (EFA) showed, all four items significantly loaded on the expected factor (FWTH1: 0.846; FWTH2: 0.921; FWTH3: 0.898; FWTH4: 0.791). In addition, results for composite reliability obtained in PLS-SEM also showed a satisfying value of 0.93 (Hair et al, 2011a; Henseler et al, 2009; Ringle et al, 2006). Similarly, examination of outer factor loadings in PLS-SEM indicated high level of reliability (FWTH1: 0.82; FWTH2: 0.91; FWTH3: 0.90; FWTH4: 0.84). In addition, convergent validity was assessed in PLS-SEM by examination of Average Variance Extracted (AVE) values. An AVE value of 0.76 indicates the successful establishment of convergent validity. Finally, results for testing discriminant validity based on the Fornell-Larcker criterion and the examination of cross-loadings indicated successful establishment of discriminant validity (Please see Section 5.5.3 on page 267). Based on these results, the measurement scale for Forward Thinking (FWTH) developed in this study is considered to be reliable and valid, and thus can be employed in future research studies.

6.3.2 Corporate Auditory Identity Management (CAIM)

Similar to the development of the scale to measure Forward Thinking (FWTH), the researcher had to develop a scale for measuring the focal construct of this research, i.e. Corporate Auditory Identity Management (CAIM). Building on the work by Melewar (2003), the construct of corporate auditory identity was conceptualised in this research as “*an assembly of auditory cues by which an audience can recognise the company and distinguish it from others*” (Bartholmé and Melewar, 2011b:62). Based on this definition, Corporate Auditory Identity Management (CAIM) was conceptualised as the “*management of auditory cues by an organisation that involve creating and implementing guidelines for the use of auditory identity elements and applications*” (Bartholmé and Melewar, 2011a:96). Qualitative findings provided strong support for this conceptualisation. The majority of interviewees confirmed the basic conceptualisation of this construct and acknowledged corporate auditory identity as a constituent of corporate identity and consequently of corporate identity management. As one consultant put it:

“I think a company that’s clear about that will think through visual identity, different forms of communication, different forms of advertising and also the auditory side as to how we can use all of these tools to convey what we want to convey; to tell the story and get over about the company, the way we want the company to be seen.”

[Corporate Reputation Consultant #1]

Consequently, in order to capture the construct Corporate Auditory Identity Management (CAIM), the researcher developed a measurement scale based on existing literature as well as qualitative data. As described in Chapter 3 this research strongly builds on the conceptual similarity between auditory identity and visual identity (Balmer, 2001a; Fraedrich and King, 1998). Therefore, scale items were predominantly borrowed from existing visual identity literature (Alessandri, 2001; Alessandri and Alessandri, 2004; Simões et al, 2005; Van den Bosch et al, 2004; 2006a) and adopted to fit the auditory construct. The initial item pool of the CAIM scale consisted of 20 items that were reduced to eight items as a result of testing for content validity (Please see Section 4.6.4 on page 198). After some further redefining, a five-item scale was tested for internal consistency. The CAIM scale

showed a very satisfying Cronbach alpha coefficient value of 0.936, thus showing good internal consistency (Bryman and Cramer, 2011; Cronbach, 1951; Hair et al, 2007; Nunnally, 1967; Nunnally and Bernstein, 1994). In addition, as a result of exploratory factor analysis (EFA), all five items significantly loaded on the expected factor (CAIM1: 0.897; CAIM2: 0.888; CAIM3: 0.846; CAIM4: 0.807; CAIM5: 0.827). Moreover, the value for composite reliability obtained in PLS-SEM also showed a satisfying value of 0.95 (Hair et al, 2011a; Henseler et al, 2009; Ringle et al, 2006) and outer loadings that were obtained in PLS-SEM also indicated high level of reliability (CAIM1: 0.91; CAIM2: 0.91; CAIM3: 0.94; CAIM4: 0.93; CAIM5: 0.79). Moreover, with regard to the assessment of convergent validity, an Average Variance Extracted (AVE) Value of 0.80 indicates the successful establishment of convergent validity. Finally, discriminant validity, which was assessed in PLS-SEM based on the Fornell-Larcker criterion and the examination of cross-loadings, was successfully established (Please see Section 5.5.3 on page 267). Overall, based on the presented results, the measurement scale for Corporate Auditory Identity Management (CAIM) that was developed in this research can be considered to represent a reliable and valid scale to capture the newly conceptualised CAIM construct, thus allowing the use of the scale in future research.

6.3.3 CEO as Driving Force (CEODRF)

In addition to the two scales presented above, no existing measurement scale for capturing the construct CEO as Driving Force (CEODRF) was available and thus had to be developed by the researcher. Numerous researchers have argued that chief executive officers play a key role regarding the definition and communication of corporate identity (Baker and Balmer, 1997; Lippincott and Margulies, 1988; Margulies, 1977; Melewar and Saunders, 1998; Olins, 1990; Wills Jr. and Ryans Jr., 1977). Consequently, linking this view to corporate auditory identity management, the Chief Executive Officer as Driving Force (CEODRF) was defined in this study as “*the degree to which the CEO is driving the topic of corporate auditory identity in the company*”. Qualitative findings from interviews provided support for this perspective. One expert on sound argued:

“I think it’s far more likely that where you see sound being used well by a company it’s about one individual in that company and probably the CEO or somebody like that who’s very sensitive.” [Sound Expert #2]

Similarly, a brand consultant stated:

“I think it’s probably the same as with visual identity. You can imagine the CEO coming in and going, ‘I think we need a jingle, get me a jingle’.” [Brand Consultant #4]

In order to obtain a measurement scale that captures this construct, the researcher generated an initial item pool that consisted of 7 items that were reduced to six items based on expert judgment (i.e. face validity). After some further purification and based on the results of exploratory factor analysis (EFA), a four-item scale showed adequate internal consistency with a Cronbach alpha coefficient value of 0.929. All four items loaded significantly on one single factor (CEODRF2: 0.815; CEODRF3: 0.891; CEODRF4: 0.890; CEODRF5: 0.881). In addition, the value for composite reliability also showed a satisfying value of 0.95 (Hair et al, 2011a; Henseler et al, 2009; Ringle et al, 2006). Furthermore, outer loadings also indicated high level of reliability (CEODRF1: 0.81; CEODRF2: 0.94; CEODRF3: 0.96; CEODRF4: 0.93) and with an Average Variance Extracted (AVE) Value of 0.83 for CEODRF convergent validity also was established. Finally, based on the assessment of the Fornell-Larcker criterion and the examination of cross-loadings, discriminant validity was established (Please see Section 5.5.3 on page 267).

It can be concluded that, similar to the scales for Forward Thinking (FWTH) and Corporate Auditory Identity Management (CAIM), the developed measurement scale for CEODRF provides a reliable and valid scale for capturing the construct CEO as Driving Force for auditory identity, which offers the possibility of employing this scale in future studies.

6.4 Hypotheses

In this research seventeen hypotheses were put forward based on an extensive literature review as presented in Chapter 2. Seven hypotheses are related to antecedents of corporate auditory identity management and 10 hypotheses are linked to perceived consequences of corporate auditory identity management (Please see Figure 3.1 on page 146). In order to test the proposed hypotheses, the structural model that reflects the path relations between the latent variables was measured using Partial Least Squares Structural Equation Modeling (PLS-SEM). The following section summarises the results of the testing of hypotheses.

While all hypotheses were supported with regard to the ten consequences, only one hypothesis related to the antecedents was supported. That is, no statistical evidence was found that organisations that can be characterised as being particularly forward thinking (Van den Bosch et al, 2006a; Van den Bosch et al, 2006b) employ corporate auditory identity management to a higher degree (H1 not supported). Likewise, no significant relation between organisations with a high level of innovation adoption (Armbruster et al, 2008; Avlonitis et al, 1994; Damanpour, 1991; Kirca et al, 2005; Wang and Ahmed, 2004) and the level of auditory identity management was found (H2 not supported).

Moreover, companies operating in highly competitive markets have been argued to strive for greater differentiation from their competitors based on their corporate image (Balmer and Stotvig, 1997; Flavián et al, 2004; Lovelock, 1984; Wilkinson and Balmer, 1996), and thus might apply additional ways of disseminating their identity to its stakeholders. However, based on the statistical results of this study, companies that operate in a highly competitive environment or follow a differentiation strategy that emphasises the aspect of their corporate image, respectively, currently do not manage their auditory identity to a significantly greater degree (H3 and H4 not supported).

Furthermore, no significant relation was found between the aspects of organisations that put emphasis on the dissemination of consistent and congruent messages through

all communication channels, in other words following an integrated communication strategy (cf. Balmer, 2001a; Bick et al, 2003; Gray and Smeltzer, 1987; Kitchen and Schultz, 1998; Kitchen et al, 2004; Low, 2000; Phelps and Johnson, 1996) and the degree of corporate auditory identity management (H5 not supported). Linked to the integrated communication paradigm, organisations that have in place well elaborated visual systems were hypothesised in this research to also more likely put emphasis on the management of auditory identity in order to ensure synchronised visual and auditory messages. However, no statistical significance was detected for this relation (H6 not supported).

Finally, numerous researchers have highlighted the importance of the CEO for any identity programme (Lippincott and Margulies, 1988; Margulies, 1977; Melewar and Saunders, 1998). Consequently, in this study the relationship between the CEO as an internal driving force and the degree of corporate auditory identity management was hypothesised and tested. Results confirm a significant relation, thus indicating that the role of the CEO of an organisation as an internal driving force constitutes a strong determinant factor with regard to the degree of corporate auditory identity management (H7 supported).

When looking at the proposed consequences of corporate auditory identity management, all hypotheses were supported, that is, the degree of corporate auditory identity management is significantly related to the perceived positive outcomes that were extracted from corporate identity and corporate visual identity literature. In detail, organisations that employ a high degree of corporate auditory identity management more likely perceive gaining differentiation, gaining competitive advantage as well as improving the image of the organisation (Baker and Balmer, 1997; Balmer, 1995; 1998; Karaosmanoglu and Melewar, 2006; Melewar et al, 2006; Ries and Trout, 1981; Van den Bosch et al, 2005; Van Riel et al, 2001) as a positive outcome of auditory identity management (H8, H9 and H10 supported). Furthermore, organisations that manage their auditory cues to a greater extent specifically expect to support their communication activities and to achieve consistent communication (Balmer, 1995; 1998; Bernstein, 1984; Bick et al, 2003; Dowling, 1986; Gray and Smeltzer, 1985; 1987; Melewar and Karaosmanoglu, 2006; Van Riel, 1995) (H11

and H12 supported). In addition, results show that organisations with a higher degree of corporate auditory identity management more likely perceive the management of corporate sound as a way to strengthen the identification of employees with the organisation (Baker and Balmer, 1997; Dowling, 1994; Olins, 1989) (H13 supported). Moreover, organisations that put emphasis on the management of their auditory cues particularly perceive positive outcomes for the organisations such as increasing recognisability and familiarity as well as generating trust (Melewar et al, 2006; Van Riel et al, 2001) (H14, H15 and H16 supported). Finally, organisations that employ auditory management to a higher degree more likely consider that this will influence consumers' buying behaviour (Melewar et al, 2006) (H17 supported).

6.5 Control Variables

In addition to the testing of proposed path relations, three control variables, namely company size, company type and identity structure were tested to assess any possible contribution to the variation of the focal construct.

Company size regularly has been linked to the aspect of corporate identity and visual identity in particular, based on the requirement of extra resources for managing visual identity (Florida et al, 2001; Subramanian and Nilakanta, 1996). However, no significant relation between company size and degree of auditory identity management was found. Supported by literature, an explanation for the absence of such a relation might arise from the fact that the management of auditory identity requires considerable smaller budgets in comparison to visual identity. As pointed out by Jackson (2003) and Schmitt and Simonson (1997), auditory cues in general are easy to change, for which the sonic logo of Intel[®] that has been changed several times while keeping its distinct melody provides a good example. Thus, sonic cues are not only more flexible but more important they are less expensive elements for expressing the identity of an organisation in comparison to visual identity. Consequently, it can be concluded that even with smaller marketing budgets auditory identity can be managed to a considerable degree, which makes company size much less of a determining factor.

Furthermore, the effect of company type which in this research refers to the two main categories of service company and product/manufacturing company was tested in relation to auditory identity management. Even though there was some support from qualitative data as well as from literature that service companies might strive for a compensation for the lack of tangibility of their intangible products by adding additional ways of communication such as auditory cues (Goldkuhl and Styvén, 2007; McDonald et al, 2001; Rushton and Carson, 1989; Van den Bosch et al, 2006a), no such effect was detected in the quantitative data. One explanation for the absence of such a relation might derive from the idea that sound might be applicable for virtually all types of companies based on the great number of possible sonic touchpoints (Jackson, 2003) (Please see Chapter 3).

On the other side, this finding could also be linked to the fact that the management of auditory identity is only a nascent discipline at the moment and regardless of the type of company not many managers so far have considered sound and music. As one interviewee clearly pointed out:

“I don’t think many companies think in terms of managing their auditory identity - I don’t even think they kind of think they’ve got an auditory identity.” [Brand Consultant #1]

This quote illustrates a general limitation of this research, namely that auditory identity so far has only been considered in a professional manner by rather few managers (For more details on this limitation please see Chapter 7).

Finally, with regard to identity structure as categorised by Olins (1989; 1995; 2008) as monolithic, endorsed and branded, no significant difference was found regarding the degree of auditory identity management. Thus, identity structure does not significantly account for the variation of the focal construct in the model. With no clear indication for such a relationship from the literature, the absence of this relation was not unexpected.

6.6 Corporate Auditory Identity Management (Focal Construct)

Literature review has revealed a substantial shortage of academic research regarding the role of sound on a corporate level (Please see Chapter 1 and Chapter 2). In particular, the topic of music and sound so far has not been adequately conceptualised as a company-controlled communicator of corporate identity in the corporate identity and corporate image literature. The auditory dimension has been neglected as a potent dimension of the corporate identity mix (c.f. Birkigt and Stadler, 1986; Schmidt, 1995), which is shown by the fact that corporate identity models almost exclusively take a visual perspective within the communication dimension (e.g. advertisement) and the design dimension (e.g. visual logo). Regardless of the notion of sound as a meaningful element of corporate identity (Balmer, 2001a; Schmitt and Simonson, 1997), the auditory dimension still has not been incorporated into the corporate identity mix. In fact, no definition of corporate auditory identity so far has been conceptualised and thus no reliable and validated measurement scales have been developed.

In this study, corporate auditory identity is defined as “*an assembly of auditory cues by which an audience can recognize the company and distinguish it from others*” (Bartholmé and Melewar, 2011a:96; 2011b:62). Findings from qualitative analysis clearly support the proposed conceptualisation and definition of the construct. For instance, as one interviewee quite clearly pointed out:

“That seems to me a very good definition because it stresses the differentiation side.” [Corporate Reputation Consultant #1]

What is more, in addition to the assessment of the definition of the corporate auditory identity construct through qualitative findings, a definition of the focal construct of this research, i.e. corporate auditory identity management (CAIM), was put forward. CAIM was defined as the “*management of auditory cues by an organisation that involves creating and implementing guidelines for the use of auditory identity elements and applications*” (Bartholmé and Melewar, 2011a:96). Based on this definition, a measurement scale based on existing visual identity literature was developed and empirically tested. As already mentioned above, the final version of

the four-item scale that resulted from exploratory factor analysis (EFA) showed satisfying values for reliability (i.e. internal consistency) as well as validity, thus allowing the application of the CAIM scale in future studies.

What is more, the conceptual definition and operationalisation of corporate auditory identity and corporate auditory identity management, respectively, were strongly based on existing visual identity literature. Based on the fact that these definitions and operationalisations were qualitatively and statistically tested and validated, this study provides support for a fundamental conceptual similarity between visual and auditory identity based on a sensory notion as suggested by various authors (Balmer, 2001a; Bartholmé and Melewar, 2009; Fraedrich and King, 1998; Lindstrom, 2005a; Schmitt and Simonson, 1997). In other words, the successful process of building on existing visual identity literature in order to develop definitions and measurement scales for corporate auditory identity supports the underlying similarity between the visual and auditory domain.

Moreover, this finding also gives rise to ultimately considering auditory identity as part of the corporate identity mix (Birkigt and Stadler, 1986; Schmidt, 1995) and including it into established corporate identity models (e.g. Melewar, 2003; Melewar and Jenkins, 2002; Melewar and Karaosmanoglu, 2006; Melewar and Wooldridge, 2001; Suvatjis and De Chernatony, 2005).

6.7 Antecedents

6.7.1 Organisational Characteristics

The characteristic of being a forward thinking organisation was linked in this study to a higher degree of auditory identity management, based on the rationale that managing auditory cues is a rather novel aspect for marketing and branding managers and might be stronger adopted by companies that generally more quickly anticipate changes and new developments (Van den Bosch et al, 2006a; Van den Bosch et al, 2006b). Similarly, organisations that can be characterised by a high degree of organisational innovation adoption, which was defined in this study as “*the*

behavioural commitment of an organisation's management to adopt and implement new ideas, behaviours, and managerial and working concepts and practices" (based on Armbruster et al, 2008; Avlonitis et al, 1994; Damanpour, 1991; Kirca et al, 2005; Wang and Ahmed, 2004) were linked to a higher degree of auditory identity management, based on the rationale that the management of sound as an additional element of company-controlled communication activities is more present in organisations that can be characterised accordingly.

However, even though these two relations were supported by one of the interviewees referring to "*more professional and deeper thinking companies*" [Corporate Reputation Consultant #1], quantitative data did not support these proposed relations and identifying possible explanations for the absence of such relations is not straightforward.

Based on the comprehensive insight on auditory identity that the researcher has gained throughout this research, the researcher concludes that the still existent shortage of a professional implementation and management of auditory identity might cause this result. As already mentioned above, the newness of the auditory topic constitutes a limitation of this study, which will be discussed in more detail in Chapter 7.

6.7.2 Market Conditions, Corporate and Communication Strategy

Based on literature review, companies operating in a competitive market, following a differentiation strategy with a focus on corporate image, and following an integrated communication strategy, respectively, have been linked to a higher degree of corporate auditory identity management.

However, quantitative data in this research does not support such direct relations. Reviewing the results from the qualitative phase of this research offer some explanation.

Even though one interviewee asserted that *“a tougher business environment will actually accelerate the development of those things because companies are looking for any way that they can get competitive edge and this is one of those ways”* [Corporate Reputation Consultant #1] and another interviewee pointed out that *“if the competitors started doing it that would be the trigger”* [Design Manager #1], some interviewees also expressed considerable doubt about such a linkage.

In particular, one corporate sound consultant expressed his critical view on the proposed linkage between competitive market conditions, integrated communication strategy and auditory identity, arguing that often the alignment of visual and auditory cues is not driven by the company but *“that is often a driver that we [the sound agency] try and put into the client’s mind. The clients tend not to come to us and say we want one channel to sound like the other channel to sound like the other to reinforce the brand, that’s not a driver for the clients”* [Sound Expert #1].

Nevertheless, as already pointed out (Please see Section 4.5.1.3 on page 176), the same sound consultant also asserted that as the awareness of companies about potential benefits of the auditory dimension will increase over time and *“as clients become more sophisticated they may demand that all channels are working with the same kind of sound and feel”* [Sound Expert #1]. Following this viewpoint, results of testing the proposed relations might result in different findings in the future when the implementation and management of corporate sound has been established more widely.

6.7.3 Corporate Visual Identity Management

Similar to the aforementioned proposed relationships, literature offers some indication that organisations with well-established visual identity systems are more likely to also take into consideration the management of corporate sound (Please see Chapter 3).

Qualitative data offered reasonable support for such a linkage (Please see Section 4.5.1.4 on page 179). As one brand consultant for instance pointed out:

“If an organisation has a focus on identity and communications and has its act together in those areas, then it’ll manage its visual identity well, and is also more likely to have considered auditory identity management, so it’s a parallel thing” [Brand Consultant #1].

However, such a direct linkage was not supported by the quantitative data that was available in this study.

One reason for the current absence of such a direct relation might be based on a sequential order of the implementation of visual identity and auditory identity. As already mentioned in Chapter 4 (Please see Section 4.5.1.4 on page 179) some interviewees argued that auditory identity management is applied subsequent to visual identity. One design manager argued:

“The visual comes first and then people with the sophistication to worry about the identity are then likely to then worry about the auditory.” [Design Manager #1]

The design manager continued:

“There needs to be a level of sophistication and understanding of corporate identity and brand and the differences before you can start to use auditory cues and auditory branding as a tool to communicate.” [Design Manager #1]

Based on this viewpoint, it might be reasonable to conclude that the majority of organisations still mainly are focusing on the visual expression of their identity, hence they have not considered corporate sound to a larger degree until now. However, similar to the aspects of market conditions, differentiation strategy and integrated communication strategy as discussed in the last section, based on qualitative findings it is reasonable to conclude that companies will increasingly deal with the management of sound, which might result in different findings of the proposed relation in the future.

6.7.4 Role of Chief Executive Officer

The role of the CEO as a key driving force in corporate identity projects has been widely acknowledged by various authors (Balmer and Stotvig, 1997; Melewar, 2003; Melewar and Saunders, 1998; Olins, 1990). Olins (1990:38) for instance argued that without the commitment of the chief executive officer a corporate identity programme “*will not get off the ground and cannot be sustained*”. Based on this viewpoint, a relation between the role of the CEO as an internal driving force regarding the management of corporate sound and the degree of auditory identity management was put forward and statistically examined in this study.

Based on the analysis of quantitative data, a statistically significant relationship between these two factors was identified. That is, the role of the CEO as driving force regarding the auditory topic is positively related to a higher degree of corporate auditory identity management.

This finding not only supports the literature that generally emphasises the important role of the CEO with regard to corporate identity and visual identity programmes (Lippincott and Margulies, 1988; Margulies, 1977; Melewar and Saunders, 1998) but more important, it expands the view about the role of the CEO towards the auditory dimension. The crucial role of the CEO regarding corporate sound is also supported by findings from qualitative data. As one sound consultant concluded from his professional experience:

“It’s far more likely that where you see sound being used well by a company it’s about one individual in that company and probably the CEO or somebody like that who’s very sensitive.” [Sound Expert #2]

In addition, referring to the ultimate decision power of the CEO, another interviewee stressed the general importance of the CEO arguing:

“If the CEO didn’t think it was right then they would stop it.” [Brand Consultant #1]

In conclusion, qualitative as well as quantitative findings suggest that the CEO is a key factor determining the degree of corporate auditory management at an organisation.

6.8 Consequences

In this research corporate auditory identity management is conceptualised as a company-controlled communication element of corporate identity management, alongside corporate visual identity.

Based on an extensive review of corporate identity and visual identity literature a variety of consequences linked to the management of corporate visual identity were extracted. Building on the conceptual similarity of the visual and auditory domain with regard to corporate identity management, subsequently, ten consequences of auditory identity management as perceived by managers were hypothesised (Please see Chapter 3).

In line with qualitative findings of this study, all proposed relationships are statistically significant. That is, findings suggest that the higher the degree of corporate auditory identity management (i.e. the more managers deal with and manage corporate auditory identity) the more managers generally anticipate various positive outcomes of auditory identity. As presented in Chapter 3, these benefits relate to a variety of disciplines.

Managers that emphasise auditory identity to a higher degree perceive aspects such as 'gaining differentiation' and 'gaining competitive advantage' as well as 'improving corporate image' as positive outcomes. Such benefits frequently have been defined as long-term and strategic benefits in identity literature (Balmer, 1995; 1998; Melewar et al, 2006; Ries and Trout, 1981; Van Riel et al, 2001). Consequently, based on the findings, managing auditory identity can be categorised in a similar way. That is, corporate identity management not only can be employed for short-term marketing effects (e.g. music for product advertising) but also for strategic reasons. The sonic logo of Intel[®] once more provides a good example

illustrating how corporate sound elements can be an integral aspect of long-term and strategic corporate identity management.

Furthermore, findings show that managers also consider aspects of corporate communication such as ‘supporting corporate communication’ and ‘supporting consistent corporate communication’ as positive outcomes of managing the auditory cues of an organisation.

Even though the relation between following an integrated communication strategy and the degree of auditory identity management was not significant (H5 not supported), and albeit there was some doubt by sound consultants about the idea that it is the organisation demanding the integration of sound into the overall communication strategy, the expectation of many managers about the positive effects of sound regarding a more consistent communication clearly can be linked to the concept of integrated communication. That is, at the moment, only a limited number of organisations might request the synchronisation of visual and auditory elements and applications, as pointed out by one sound consultant:

“We try and sell that to them rather than them come and request it from us.” [Sound Expert #1]

However, as this study shows, when investigating the expected benefits of auditory identity management managers clearly agree on outcomes such as more aligned and consistent communication, which commonly has been linked to the concept of integrated communication (Beard, 1997; Christensen et al, 2008; Phelps et al, 1996). Nevertheless, as pointed out by one interviewee, this discrepancy might decrease over time:

“As clients become more sophisticated they may demand that all channels are working with the same kind of sound and feel” [Sound Expert #1].

As presented in Chapter 3, visual elements such as logos can act for employees as a source of identification with the organisation (Dowling, 1994; Olins, 1989). Results of this study generally support such linkage in that sense that managers also perceive

‘strengthening identification of employees with the organisation’ as a realistic outcome of corporate auditory identity management. In other words, similar to visual elements that can act as a badge (Dowling, 1994:132) sonic logos or corporate songs also can serve as a commonly shared identity element for employees to identify themselves with an organisation.

Moreover, visual identity has been frequently linked to ‘increasing recognisability’, ‘increasing familiarity’ and ‘generating trust’ (Melewar et al, 2006; Van Riel et al, 2001). The findings of this study basically support such linkages with regard to auditory elements and applications based on the fact that such consequences are considered by managers as expected outcomes of managing auditory identity. Similar to the use of visual logos as a means to make an organisation visible and recognisable to its different stakeholders as well as leading to a stronger familiarity, auditory elements and applications such as sound logos and corporate songs are considered by managers to be adequate cues that allow customers to more easily recognise an organisation and familiarise with it. For instance, companies such as Intel[®] or Direct Line using distinctive sonic logos provide good examples for the use of auditory cues as a way of increasing recognisability and familiarity. Qualitative data also provides some reference to the aspect of recognisability and familiarity. As one interviewee pointed out:

“I guess the Holy Grail is to play a piece of music or a piece of sound and people recognise that that equals [name of company].” [Design Manager #2]

Finally, visual elements and applications have been argued to have an effect on purchase decisions (Melewar et al, 2006). Findings from quantitative data indicate an analogous linkage for auditory elements and applications. That is, managers that manage auditory identity to a greater extent generally expect that sound and music can ‘influence buying behaviour’. This viewpoint also was raised during the interviews. One interviewee referred to the meaning of sound and music in retail shopping by pointing out:

“[...] ultimately, and the most powerful one, as I’ve said before, is in retail where you are looking at a direct uplift in sales because people

behave differently in shops because you change the sound in those shops” [Sound Expert #1].

To sum up, it can be concluded that all proposed consequences of managing auditory identity were particularly acknowledged by managers that employ a higher degree of auditory identity management. Moreover, bearing in mind that all tested consequences of auditory identity are based on established consequences of visual identity management, the wide agreement of managers regarding the outcomes of auditory management provides further support of the conceptual similarity of the visual and the auditory dimension.

The next chapter presents theoretical as well as managerial implications of this research. Moreover, limitations of this study are presented and avenues for future research are outlined.

7. Conclusion

7.1 Introduction

Corporate visual identity has been widely recognised in corporate identity literature as a crucial element of the corporate identity mix and as a vital factor when conveying the identity of an organisation (Abratt, 1989; Baker and Balmer, 1997; Dowling, 1994; Melewar and Saunders, 1999; Van den Bosch et al, 2006a). In contrast to the visual dimension, other sensory features such as sound have received much less attention by academics until now. Thus, there is still a lack of explanatory models and empirical studies regarding auditory identity.

The overall aim of this research was to widen the academic perspective and to develop further knowledge in the corporate identity and corporate communication field with regard to the topic of auditory identity. Moreover, the conceptualisation and the development of reliable and valid measurement scales of corporate auditory identity management was a key aim of this study. Finally, a further aim was to develop a process model explaining determinants of corporate auditory identity management and testing consequences of corporate auditory identity management as perceived by managers.

In the following, this chapter presents theoretical contributions with regard to the conceptualisation and operationalisation of corporate auditory identity and corporate auditory identity management. Moreover, managerial implications of the findings are provided. Finally, limitations of this study are discussed and avenues for future research are presented.

7.2 Theoretical Implications

This thesis advances knowledge in the corporate identity, corporate image and corporate communication literature regarding a number of aspects.

Firstly, the overall contribution of this research is that it is, to the best of the researcher's knowledge, one of the first attempts to investigate auditory identity in relation to corporate identity from a corporate perspective. Moreover, this study helps to integrate auditory identity as an additional element into the corporate identity mix (Balmer and Soenen, 1999; Birkigt and Stadler, 1986; Schmidt, 1995) and into established corporate identity models (Melewar, 2003; Melewar and Jenkins, 2002; Melewar and Karaosmanoglu, 2006; Melewar and Wooldridge, 2001; Suvatjjs and De Chernatony, 2005) which raises the awareness for a more holistic conceptualisation of corporate identity.

What is more, the conceptualisation of auditory identity as an additional element of corporate identity management alongside visual identity helps to overcome the predominance of the visual perspective (Balmer, 2001a), thus advancing the possibilities of corporate identity management. Even more, the investigation of corporate auditory identity constitutes an initial step in unlocking existing models allowing for the integration of additional dimensions in the future. In particular, based on the finding that auditory identity offers similar consequences as visual identity and building on the broader sensory identity concept, this thesis advocates the future recognition and integration of other sensory dimensions.

More specifically, this thesis contributes to literature by providing a definition of corporate auditory identity as well as corporate auditory identity management. In detail, corporate auditory identity was defined as *“an assembly of auditory cues by which an audience can recognize the company and distinguish it from others”* (Bartholmé and Melewar, 2011a:95; 2011b:62) and corporate auditory identity management was defined as *“the management of auditory cues by an organisation that involves creating and implementing guidelines for the use of auditory identity elements and applications”* (Bartholmé and Melewar, 2011a:96). Findings from qualitative data confirm the definition of corporate auditory identity and thus lay down the basic prerequisite for the operationalisation of the auditory construct.

Based on the qualitatively validated construct definition of corporate auditory identity, this study in addition provides scales for measuring the management of

corporate auditory identity. Using different techniques such as descriptive statistics, exploratory factor analysis and PLS-SEM, the scale was statistically tested and confirmed to be reliable and valid and thus can be employed by other researchers in the future. In addition, the development of the items that make up the scale offer initial insight into the role of auditory identity as a facet of corporate identity management.

In addition to the scale that measures auditory identity management, scales for the construct 'Forward Thinking' and 'CEO as Driving Force' were developed and statistically validated. Even though for both scales more testing and verification in different research settings is recommendable, the scales can serve as valid starting points for other researchers.

A further contribution of this study relates to the development of the conceptual framework. The developed framework for the first time attempts to open the black box of the long-time neglected domain of auditory identity by proposing factors that determine auditory identity management and by linking auditory identity to a set of consequences that were build on consequences that have been widely agreed in literature to arise from managing visual identity.

Subsequently, this study contributes to academic knowledge by empirically testing the conceptual framework, that is, to assess the significance of possible factors determining auditory identity management as well as consequences of corporate auditory identity management as perceived by managers. As a result of confirming or declining proposed path relations between latent constructs, expressed by the hypotheses, this study provides some first evidence of factors that are relevant and should be taken into consideration by researchers in the future when developing conceptual frameworks that include constructs such as corporate identity, corporate image or corporate communication.

Next, by investigating auditory identity with regard to its potential in supporting the dissemination of consistent messages, this study expands the knowledge about orchestrating elements that convey corporate identity, which consequently advances

the understanding of the integrated communication paradigm. Even though there was no support for the direct link between companies that follow an integrated communication strategy and the degree of auditory identity management, findings do suggest that there is some expectation by managers that the management of auditory identity can support corporate communication and can help to achieve more consistent communication, which contributes to the understanding of the concept of integrated communication.

There is wide agreement in literature about the existence of different types of communication (Alessandri, 2001; Balmer, 2001a; Balmer and Gray, 1999; Cornelissen, 2000; Karaosmanoglu and Melewar, 2006; Melewar and Karaosmanoglu, 2006; Simões et al, 2005; Williams and Moffitt, 1997; Zinkhan et al, 2001). In particular, while communication that can be planned and controlled by an organisation has been linked to aspects such as corporate identity, corporate communication, corporate advertising and public relations, communication that cannot be controlled by an organisation includes for instance industry image, country of origin image and word of mouth (Balmer, 2001a; Balmer and Gray, 1999). This study advances the concept of controlled communication by introducing auditory identity as an additional element of the communication disciplines that can be actively managed by an organisation. More specifically, this study advances the concept of total corporate communication as defined by Balmer and Gray (1999) by delineating corporate auditory identity as an element of the two categories of primary and secondary communication.

Finally, on a more general note, by addressing the new and under-researched field of auditory identity, this study stimulates the interest and thinking of academics not only about the so far neglected dimension of sound and music in the corporate identity, communication and marketing discipline but also for the entire sensory concept. In addition, based on this study that offers some fundamental insights into the domain of auditory identity the researcher believes that this could open a broad new area for future research.

7.3 Managerial Implications

In addition to the theoretical contributions presented above, this study provides various implications for managers that are outlined in the next section.

By examining corporate auditory identity, this research offers an initial step towards the claim of academics and practitioners such as Balmer (2001a) and Lindstrom (2005a) for considering non-visual elements when managing corporate identity. The understanding regarding the utilisation of auditory elements and applications gained in this study offers managers a chance to consider and to take on board additional ways of conveying the identity of their organisation besides the traditional often visually dominated disciplines. Even more, by putting forward a research study on auditory identity the researcher hopes that this will work as a trigger for managers to adopt a more holistic perspective regarding the management of corporate identity in the future.

Promoting additional ways of communication such as the auditory dimension generally leads to increasing complexity in managing corporate identity for managers. Bearing this in mind, this study is beneficial for managers as it provides some vital clarification regarding auditory identity by offering a precise definition of the auditory domain and thus reducing anxiety about this specific topic. Consequently, based on a better understanding of auditory identity this study helps managers in coping with the complexity of communication in this specific area.

Moreover, based on the clarification of auditory identity, this study facilitates the access for managers to the auditory topic and supports managers in successfully integrating sound and music into the set of communication activities in the future. In particular, based on the wide support for a conceptual similarity between visual identity and auditory identity, existing concepts of visual identity management can serve as a basic guidance regarding auditory identity. Thus, managers can build on their knowledge about visual identity to guide them when addressing auditory identity.

Findings of this study show that the role of the CEO is crucial for the success of an auditory identity management programme. In other words, if the CEO is not on board and supports the implementation of auditory identity management the project is likely to fail. Accordingly, marketing and brand managers that intend to address auditory identity in the organisation or are responsible for any kind of auditory communication are advised not only to seek the approval but the clear commitment and full support of the CEO. Likewise, brand and communication consultants aiming to provide consulting on auditory identity to any organisation are strongly advised to get the CEO on board at the beginning of the project. Only with a CEO that shares the belief about the importance of auditory identity the consulting agency is likely to realise a successful auditory project.

Moreover, when managers aim to convince their superiors or the CEO or when external consultants need to provide justification to a client company for the introduction of a comprehensive and more professional auditory identity management system the beneficial outcomes in this study provide a valuable argumentation aid. In particular, the variety of identified consequences including aspects such as improving corporate image, supporting consistent communication and increasing familiarity offers a valuable collection for managers as well as consultants to support their endeavour.

Company size and available resources might be one specific concern mentioned by superiors, CEO or client companies with regard to the implementation of auditory identity management. However, results from testing of control variables as well as qualitative findings suggest that managing auditory identity requires fewer resources and generally is not determined by company size. In fact, in comparison to visual identity where the change of the visual logo can cost vast amounts of money, sound has been argued to be more flexible and easier to change (Schmitt and Simonson, 1997), thus making it an attractive communication vehicle for smaller companies too.

In addition, all consequences of auditory identity management identified in this study are highly beneficial for every organisation. In other words, virtually every manager strives for improving corporate image, improving corporate reputation, supporting

communication, achieving more consistent communication, increasing recognisability and familiarity to recapitulate just a few of the consequences. Based on this study, managers can gain a deeper understanding of the potential of corporate sound. Consequently, managers are advised to re-evaluate the current management of corporate sound at their organisations and to consider a more strategic utilisation and management of corporate sound.

Moreover, while ignoring the management of sound in some instances might only mean to miss out on some of the potential of sound (e.g. recognisability, employees identification), with regard to the consequence of consistent communication, ignoring auditory identity management might be considerably harmful. That is, building on the integrated communication paradigm, failing to align auditory identity with corporate identity and visual identity in particular leads to inconsistency in the various communication channels. Since many organisations are little aware of the auditory applications and elements (sonic touchpoints) (Jackson, 2003) that already exist in the organisation (e.g. telephone on hold), such misalignment often will occur unnoticed by managers. Of course, bearing in mind the negative effects of inconsistent messages, managers are strongly advised to incorporate corporate auditory identity management into their overall communication toolbox.

Finally, interviewees not only pointed out that increasing competition might lead to an increase in auditory identity management. More specifically, the decision of main competitors to implement corporate sound might be a likely trigger for companies to consider a much more comprehensive management of auditory identity. For instance, one interviewee [Design Manager #1] pointed out “*if the competitors started doing it that would be the trigger*”. Following this perspective, it could be concluded that as more and more companies start to express their identity for instance through sonic logos, this could initiate a kind of domino effect. Consequently, managers first are advised to keep track of the communication activities of their main competitors in order to be prepared to react accordingly. More important, referring to the fact that visual logos are patented in most cases, managers are advised to address corporate sound in good time and more specifically to develop and patent sonic elements such as a sonic logo as long as there is enough room for an unrestricted design process.

Furthermore, on a more individual level, marketing, communication and brand managers are advised not to miss out on gaining and demonstrating some expertise on corporate sound since this might become if not a vital but still beneficial skill in a professional career.

In addition, as a consequence of a possible increase in the implementation of corporate sound, demand for consultancy work on sound and music might considerably increase. Of course, as this area of communication so far frequently has been neglected by companies and agencies alike, corporate sound could offer great business opportunities for many design and brand consultancies. Thus, agencies are advised to think about including auditory identity into their portfolio of consulting services. However, it also has to be stressed that agencies that plan to offer such services need to build up sufficient expertise on auditory identity in order to adequately react to clients' demands in the future.

7.4 Limitations of the Study

When assessing the findings and implications of this study, it is vital to recognise possible limitations at a theoretical, conceptual and methodological level. Such limitations frequently are caused by time, financial resources or access constraints. The following section presents key limitations of this study.

Firstly, during the initial stages of this study it became clear that the newness of the research topic of auditory identity was a critical aspect. Extensive review of literature revealed that no definition of the construct of auditory identity and no appropriate measurement scales were available. Moreover, qualitative findings indicated that the extent of implementation of auditory identity management at the time this study was conducted was limited. Various respondents argued that despite the agreement about the significance and potential of music and sound, the management of auditory identity has not been widely implemented. As one interviewee pointed out:

“I think a lot of companies who are very good on the visual side still haven't quite caught up with the auditory side.” [Corporate Reputation Consultant #1]

In a similar way, another interviewee expressed his view that the management of music and sound still is not considered by the majority of companies as an essential component of their communication activities:

“I think sound is still seen by many as a luxury and it’s something you get to when you’ve done everything else.” [Sound Expert #2]

Another design consultant argued:

“So it hasn’t really developed into a strategic tool for very many of them yet.” [Brand Consultant #3]

These views clearly relate to the general newness and limited application of auditory identity despite numerous examples of auditory applications that have been put forward in the literature such as the sonic logos of Intel[®], Direct Line, Siemens, Allianz, BAA and Lufthansa (MetaDesign, 2010; Treasure, 2007). As a consequence of the limited implementation of auditory identity management findings and assumptions of this study might show some deficits. Nevertheless, based on the identified potential of corporate auditory identity and the crucial role it can play in corporate identity management the researcher decided to accept this limitation and to pursue with the research.

Secondly, the testing of the scale for measuring corporate auditory identity management also needs to be seen in the light of the above-mentioned limited implementation of auditory identity at organisations. Bearing in mind that only a limited number of organisations at the time this study was conducted have implemented auditory identity management to a considerable degree, the process of measuring this construct might include some deficits. Despite this limitation, it has to be emphasised that based on statistical considerations including satisfying values for reliability, discriminant and convergent validity, a sound research instrument was developed. Nevertheless, it might be advisable to verify this scale in the future based on new primary data when auditory identity is more widely established among organisations.

Thirdly, it has to be noted that the sampling frame used in this study does not reflect the target population perfectly, as already mentioned in Chapter 4. Data that was available from APIS only included companies with more than 100 employees or a marketing budget of more than 100.000 GBP. In addition, based on qualitative findings some industry sectors were expected to have already implemented auditory identity management to a higher degree, which led to the decision to conduct this study in a defined set of industries, including the media, information and communication as well as the banking and finance industry (See Chapter 4). For these reasons, this study is limited in terms of its generalisability to other industries and further studies in other industry settings would be beneficial to increase the generalisability of the scales and findings.

The fourth limitation refers to the relatively small response rate and sample size in this study. In contrast to many PhD theses that collect data at the individual consumer level, this study was placed at a corporate level. In particular, data from middle and senior management from the branding, marketing and communication department was required. Obtaining the willingness of these managers to contribute generally is difficult and might be particularly the case for a topic such as auditory identity with which many of the managers might not be very familiar. In addition to the fact that several studies have been published with relatively small sample sizes (e.g. Holzmüller and Kasper, 1991; Kitchen et al, 2004; Lee, 2001; Mintu-Wimsatt and Graham, 2004), what is more important, the researcher has used PLS-SEM instead of traditional CB-SEM in order to overcome this limitation. PLS-SEM has been widely acknowledged to produce reliable results for small sample sizes (Deal, 2006; Haenlein and Kaplan, 2004; Hair et al, 2011a; Henseler et al, 2009; Hsu et al, 2006; Lee, 2001; Ringle et al, 2006; Tenenhaus et al, 2005) (Please also see Chapter 5).

Fifthly, as outlined in Chapter 4 (Please see Section 4.7.2.3 on page 205) the researcher had to refrain from conducting a pilot study due to the limited number of returned questionnaires. In detail, following the suggestion by Reynolds et al (1994) all of the gathered quantitative data was used for the main analysis, in order to allow a reliable analysis with PLS-SEM. Nevertheless, scale purification and testing for

scale reliability that traditionally is conducted based on a pilot study, were still thoroughly performed in this study. That is, scale purification was performed in terms of testing for content validity (Please see Chapter 4) and testing for scale reliability was performed as part of exploratory factor analysis (EFA) (Please see Chapter 5).

The sixth limitation refers to the fact that the researcher was not able to test for non-response bias in a traditional way, i.e. by comparing early against later respondents (Diamantopoulos and Siguaw, 2006; Diamantopoulos and Winklhofer, 2001; Low, 2000; Peck and Wiggins, 2006; Wang and Ahmed, 2004; Zeithaml et al, 1985). Due to the fact that absolute confidentiality was assured to all respondents and thus no tracking system was put in place, the researcher was not able to identify any non-respondents in order to evaluate possible reasons for refusal to participate. Moreover, owing to the setup of the database with no tracking system connected to the web-based questionnaire the researcher was not able to allocate particular database entries to specific individuals. Thus, the researcher was not able to differentiate between early and late respondents (Please also see Section 4.7.4 on page 216). As already outlined in Chapter 4, Armstrong and Overton (1977:397) refer to the concept of 'Interest Hypothesis' that "*involves the assumption that people who are more interested in the subject of a questionnaire respond more readily*", which can offer an explanation for small response rates. In detail, owing to the fact that auditory identity is a quite new discipline for many managers and based on the 'Interest Hypotheses' (Armstrong and Overton, 1977; Churchill Jr. and Iacobucci, 2004; Kinnear and Taylor, 1991), some lack of interest among managers regarding auditory identity can be assumed, leading to limited response rates and some possible non-response bias in this study (Please also see Section 4.7.4 on page 216).

In conclusion, several limitations of this study have been presented that need to be acknowledged. However, the researcher believes that possible bias and deficits of this study can be overcome by conducting additional research. The next section presents avenues for future research.

7.5 Avenues for Future Research

Firstly, taking this study on corporate auditory identity as a starting point, an entire new research area dealing with corporate sound arises that offers a myriad of research avenues. Moreover, not only sound and music but also all other sensory dimensions as outlined in Chapter 1 imply promising research areas. Exploring all sensory dimensions as possible ways to convey the identity of an organisation might advance knowledge on corporate identity and related topics and might reveal further beneficial aspects for organisations.

Secondly, in this research corporate auditory identity management was measured based on data collected in the media, information and communication as well as the banking and finance industry of companies based in the United Kingdom. Consequently, in order to provide some further verification of conceptualisations and measurement scales as well as to increase the generalisability of findings, conducting such a study in different industries and countries would be advisable.

Thirdly, as this study investigated the consequences of auditory identity as perceived by managers, thus taking a corporate perspective, future research that considers outcomes of corporate auditory identity management from a consumer perspective could provide additional knowledge on auditory identity.

Fourthly, to the best of the researcher's knowledge, the provided conceptual framework is the first of its kind including determining factors and consequences of corporate auditory identity management. Thus, by acknowledging possible shortcomings of this early version of the framework, further refinement of the conceptual framework in the future is worthwhile.

Lastly and most importantly, as already mentioned as one limitation of this research, qualitative data suggested that auditory identity management still is in its infancy, despite numerous sonic examples. As one interviewee pointed out:

“The auditory elements still have some catching up to do, and in some way to have the same sort of discipline and the same sort of thinking

which has already been used on the visual side probably is a good thing just to get the professionalism and the discipline into thinking about auditory cues.” [Corporate Reputation Consultant #1]

However, there was also some indication that the awareness by managers about the auditory topic and thus about corporate auditory identity management will increase over time. As one interviewee argued:

“I think you’re ahead of the curve I don’t think people think about managing their auditory identity and I think you’re in an emerging position.” [Brand Consultant #1]

Another interviewee similarly argued:

“I think we haven’t had experience of I don’t think any companies that have taken this particularly seriously. I think that those strategies will be something that will kind of evolve in time.” [Brand Consultant #3]

Bearing in mind the positive consequences of auditory identity management identified in this study, there is a realistic chance that in some years time a considerable number of organisations will deal with sonic elements and applications to a much greater extent and in a more professional manner. The expectation about auditory identity and thus about the future development can be indirectly inferred from the comment by one interviewee:

“If you do do it well you stand out, and it can differentiate you, and it can be a very valuable part of your sort of corporate and communications tool kit. And, and the surprise is that more organisations don’t put more effort into it.” [Brand Consultant #1]

Consequently, based on the assumption that corporate auditory identity will gain considerable attention among managers in the future, which will lead to a substantial increase of auditory applications and auditory management, future research including a replication of this study would further advance knowledge on this subject matter.

7.6 Summary

This PhD thesis has investigated the so far neglected auditory domain as part of corporate identity management thereby aiming to identify factors that determine the management of auditory identity as well as consequences of corporate auditory identity management as perceived by managers. By collecting qualitative data through interviews with managers and consultants from UK companies as well as quantitative data from questionnaires a triangulated research approach was followed.

Based on qualitative data, a key finding of this study is that there is support for the conceptual similarity between the well-established construct of visual identity and auditory identity. Moreover, the definitions of corporate auditory identity developed in this PhD thesis were widely supported and hence can serve as a valid foundation for future research. In addition, the traditional consequences of visual identity were widely considered by interviewees to apply to auditory identity in a similar way.

What is more, consequences of auditory identity that have been extracted from corporate identity and visual identity literature were also statistically supported based on quantitative data. In addition, there was statistical evidence for the importance of the CEO as an internal driving force for the management of auditory identity.

In general, based on the insight that the researcher has gained during the completion of this study with regard to the importance and potential of corporate sound, academics and scholars in the identity, communication and branding discipline are strongly advised to no longer neglect the auditory dimension but to include it in their future thinking, concepts, frameworks and models.

Even more crucial, bearing in mind the expected positive outcomes of managing auditory identity, managers that are responsible for corporate identity, communication or branding of an organisation are strongly advised to include sound by default into their communication strategies. Correspondingly, consultants are advised to consider the inclusion of corporate sound into their service portfolio.

All in all, the researcher believes that this study significantly contributes to and advances existing knowledge in the corporate identity, corporate image and corporate communication domain. Moreover, the researcher sincerely hopes that this thesis will stimulate the thinking of academics and practitioners alike regarding the role of corporate auditory identity in their future work. In any case, based on the comprehensive insight the researcher has gained during the completion of this study, the researcher strongly believes that exciting and inspiring times will be ahead for any manager, consultant or academic who takes an active interest in corporate auditory identity.

8. References

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9. Appendix

Appendix 1

Table 9.1 – Auditory Elements and Applications

Auditory Cues / Elements	
Audio Brand Guidelines, Brand Voice, Brand Music, Sound Logo, Product Sound, Advertising Sound, Soundscapes in Spaces, Sound on the Telephone	(Treasure, 2007:142)
Audio Logo, Song, Objects, Sound Grounds, Functional Sounds, Voice(s)	(Bronner, 2007:89)
Sonic Touchpoints / Applications	
Desktop, Conferences, Offices, Internet Websites, CD-ROM, Events, Corporate Film, Parties, Retail, Cinema, IVR (interactive voice recognition), TV, Radio, Telephone Hold	(Jackson, 2003:6)
Product Interface, Acoustic Guiding System, Image Presentation, Point of Sale, Trade Show, Internet, Mobile Telecommunication, Telephone, TV, Radio	(Bronner, 2007:89)

Appendix 2 – Interview Guide for Agencies / Consultancies

Interview Facts	
Name of Agency:	
Position of Interviewee:	
Date:	
Place:	
Length of Interview:	
Interviewer:	Roland H. Bartholmé (PhD researcher)
Introduction:	My name is Roland H. Bartholmé. I am a PhD student at Brunel Business School, Brunel University, UK. After working as a project manager and consultant in a new media agency, I completed a MBA at Anglia Ruskin University in Cambridge, UK. After that, I worked as head of marketing. Currently, I am working on my PhD thesis, which is supervised by Professor TC Melewar.
Aim of the Research:	The focus of this research is to investigate the management of auditory identity from an organisational perspective. In detail, this research examines antecedent factors that determine the management of auditory identity and the consequences of auditory identity management as perceived by companies.
Questions ¹	
Q1:	This research investigates how companies manage and perceive sound as part of their corporate identity (i.e. corporate auditory identity). Will you please give your opinion on the following definition of auditory identity? <i>“Corporate auditory identity is an assembly of auditory cues by which an audience can recognise the company and distinguish it from others”</i> (Based on Melewar, 2003:201). Please indicate your level of agreement and state why you agree or not agree.
Q2:	Visual identity (corporate design) has been defined in academic literature as consisting of five key elements (i.e. corporate name, symbol or logotype, typography, colour and slogan) and applications (e.g. stationery, brochures, architecture, advertisements, vehicles, web sites and corporate clothing) (cf. Baker and Balmer, 1997; Dowling, 1994; Henrion and Parkin, 1967; Melewar and Saunders, 2000; Topalian, 1984; Van den Bosch et al, 2006a).

¹ All questions generated by the researcher.

	With regard to the distinction between elements and applications, do you think that auditory identity can be categorised in a similar way? If not, please state why not. If yes, how would you categorise and define auditory identity?
Q3:	Based on your experience, what would you consider as organisational characteristics of companies that emphasise the management of auditory identity?
Q4:	How would you describe the market environment of companies that emphasise the management of auditory identity?
Q5:	How would you describe the corporate strategy and the communication strategy of companies that emphasise the management of auditory identity?
Q6:	How would you describe the visual identity (corporate design) of companies that emphasise the management of auditory identity?
Q7:	How would you describe the role of the CEO regarding the management of auditory identity?
Q8:	According to your experience, what do companies consider as desired outcomes of managing auditory identity?

Appendix 3 – Interview Guide for Companies

Interview Facts	
Name of Company:	
Position of Interviewee:	
Date:	
Place:	
Length of Interview:	
Interviewer:	Roland H. Bartholmé (PhD researcher)
Introduction:	My name is Roland H. Bartholmé. I am a PhD student at Brunel Business School, Brunel University, UK. After working as a project manager and consultant in a new media agency, I completed a MBA at Anglia Ruskin University in Cambridge, UK. After that, I worked as head of marketing. Currently, I am working on my PhD thesis, which is supervised by Professor TC Melewar.
Aim of the Research:	The focus of this research is to investigate the management of auditory identity from an organisational perspective. In detail, this research examines antecedent factors that determine the management of auditory identity and the consequences of auditory identity management as perceived by companies.
Questions ¹	
Q1:	This research investigates how companies manage and perceive sound as part of their corporate identity (i.e. corporate auditory identity). Will you please give your opinion on the following definition of auditory identity? “ <i>Corporate auditory identity is an assembly of auditory cues by which an audience can recognise the company and distinguish it from others</i> ” (Based on Melewar, 2003:201). Please indicate your level of agreement and state why you agree or not agree.
Q2:	Would you say that your company emphasises the management of its auditory cues (i.e. auditory identity)? If yes, in which manner? If not, what do you think are the reasons for that?
Q3:	Visual identity (corporate design) has been defined in academic literature as consisting of five key elements (i.e. corporate name, symbol or logotype, typography, colour and slogan) and applications (e.g. stationery, brochures,

¹ All questions generated by the researcher.

	architecture, advertisements, vehicles, web sites and corporate clothing) (cf. Baker and Balmer, 1997; Dowling, 1994; Henrion and Parkin, 1967; Melewar and Saunders, 2000; Topalian, 1984; Van den Bosch et al, 2006a). With regard to the distinction between elements and applications, do you think that auditory identity can be categorised in a similar way? If not, please state why not. If yes, how would you categorise and define auditory identity?
Q4:	Do you think that there are particular characteristics of your company that have an effect on how and to what degree auditory cues (i.e. auditory identity) are managed at your company? If yes, which organisational characteristics do you think of?
Q5:	Do you think that the market environment in which your company operates have an effect on how and to what degree auditory cues (i.e. auditory identity) are managed at your company?
Q6:	Do you consider auditory cues (i.e. auditory identity) as part of the communication strategy in your company?
Q7:	Do you see any relationship between the management of visual identity (i.e. corporate design) and the management of auditory identity in general and in your company in particular?
Q8:	How would you describe the role of the CEO of your company regarding the management of auditory cues of your company (i.e. auditory identity)?
Q9:	What would you consider as desired outcomes of the management of auditory cues (i.e. auditory identity)? Please give reasons for each of the outcomes.

Appendix 4 – Cover Letter for Data Collection in Stage 1

Research project as part
of a PhD study at



<<Company>>
<<Forename>> <<Surname>>
<<Job Function>>
<<Address 1>>
<<Address 2>>
<<Address 3>>
<<Address 4>>
<<TOWN>>
<<POSTCODE>>

Nationwide Research Study on Corporate Sound

5th February 2010

Dear <<Forename>> <<Surname>>,

Sound and music can be crucial components of the communication activities of a company. As the well-known sonic logo of Intel® shows, communicating the identity of a company via sound can be very successful. This research will contribute to move this important topic forward by exploring music and sound as an element of identity management, corporate and marketing communication and corporate branding.

Your Participation is Significant – It is important for us to stress that your participation is strictly voluntarily. However, the success of this nationwide research study depends entirely on the contribution of companies like yours. Therefore, we greatly appreciate your support!

Confidentiality of your data is very important to us. For that reason, you can be absolutely assured that:

- Neither the respondents nor the companies can be identified and no personal names will be disclosed.
- All data will be reported in an aggregated form and will be used for statistical purposes only.
- This questionnaire has been approved by the Brunel Business School Research Ethics Committee.

Advantages for You as Respondent – This research study will provide valuable insight into the auditory dimension, which ultimately will offer you as a company new ways to present yourself in the market place. Of course, final results of the study will be sent to you in an aggregated form on request.

How to Fill in the Questionnaire – Most importantly, there are no right or wrong answers. Just circle the option that best reflects your opinion. It takes less than 20 minutes to complete the questionnaire. When completed, just use the enclosed envelope to return the questionnaire free of charge.

If you require some additional information in order to reach a decision about participating, please do not hesitate to contact me directly: Roland H. Bartholmé (roland.bartholme@brunel.ac.uk).

We would like to thank you very much in advance for your valuable time and your support.

Yours sincerely

Roland H. Bartholmé
(Doctoral Researcher)

Professor T C Melewar, PhD
(Professor of Marketing and Strategy)

Appendix 5 – Printed Questionnaire for Data Collection in Stage 1

Nationwide Research Study on Corporate Sound

How to fill in this questionnaire: Please circle the most appropriate option to indicate if you agree or disagree with the following statements (1 = strongly disagree, 4 = neither agree nor disagree, 7 = strongly agree).

Section 1

1.1	In our company we anticipate future developments that might be relevant to our business.	strongly disagree	1	2	3	4	5	6	7	strongly agree
1.2	In our company employees are encouraged to think about future developments.	strongly disagree	1	2	3	4	5	6	7	strongly agree
1.3	In our company we regularly discuss future developments that might be relevant to our business.	strongly disagree	1	2	3	4	5	6	7	strongly agree
1.4	In our company there is a lot awareness of future developments that might be relevant to our business.	strongly disagree	1	2	3	4	5	6	7	strongly agree
1.5	In our company employees are encouraged to take a long term perspective.	strongly disagree	1	2	3	4	5	6	7	strongly agree
1.6	Apart from our communication activities for the next 12 months, in our company we also think about how we will communicate in five or more years from now.	strongly disagree	1	2	3	4	5	6	7	strongly agree

Section 2

2.1	If one of our main competitors adopts an important innovation our company reacts immediately by adopting the innovation as well.	strongly disagree	1	2	3	4	5	6	7	strongly agree
2.2	In our company we are suspicious of new inventions and new ways of thinking.	strongly disagree	1	2	3	4	5	6	7	strongly agree
2.3	In our company we are reluctant about adopting new ways of doing things until we see them working for companies around us.	strongly disagree	1	2	3	4	5	6	7	strongly agree
2.4	In our company we do consider new innovations even before other companies are using them.	strongly disagree	1	2	3	4	5	6	7	strongly agree
2.5	We are usually one of the last companies in our industry sector to accept something new.	strongly disagree	1	2	3	4	5	6	7	strongly agree
2.6	In our company employees are supported if they want to try new ways of doing things.	strongly disagree	1	2	3	4	5	6	7	strongly agree

Section 3

3.1	Competition in our market is very strong.	strongly disagree	1	2	3	4	5	6	7	strongly agree
3.2	There are many „promotion wars“ in our industry.	strongly disagree	1	2	3	4	5	6	7	strongly agree
3.3	Anything that one competitor can offer others can match easily.	strongly disagree	1	2	3	4	5	6	7	strongly agree
3.4	Price competition is a characteristic of our industry.	strongly disagree	1	2	3	4	5	6	7	strongly agree
3.5	In our industry, we hear of a new competitive move almost every day	strongly disagree	1	2	3	4	5	6	7	strongly agree

Section 4

4.1	In order to differentiate from our competitors, our company strives for a corporate image that consumers consider to be unique.	strongly disagree	1	2	3	4	5	6	7	strongly agree
4.2	In our company we try to differentiate from our competitors mainly based on our corporate image, rather than on product, service, personnel or distribution.	strongly disagree	1	2	3	4	5	6	7	strongly agree
4.3	For our company it is important that consumers make their buying decisions largely based on the image they have of our company.	strongly disagree	1	2	3	4	5	6	7	strongly agree
4.4	A particular strength of our company is our corporate image that enables us to compete in the market place.	strongly disagree	1	2	3	4	5	6	7	strongly agree
4.5	Our corporate image is the main source for differentiation against our competitors.	strongly disagree	1	2	3	4	5	6	7	strongly agree

Section 5

5.1	All communication activities of our company are planned and executed by the same person or people.	strongly disagree	1	2	3	4	5	6	7	strongly agree
5.2	All communication activities of our company are strategically consistent.	strongly disagree	1	2	3	4	5	6	7	strongly agree
5.3	All communication activities of our company are aligned to convey a common message.	strongly disagree	1	2	3	4	5	6	7	strongly agree
5.4	Our target audiences receive similar messages from each of the communication activities of our company.	strongly disagree	1	2	3	4	5	6	7	strongly agree

Section 6

6.1	In our company we have detailed guidelines for the use of visual elements and applications (i.e. corporate visual identity).	strongly disagree	1	2	3	4	5	6	7	strongly agree
6.2	An audit of our visual communication is undertaken periodically.	strongly disagree	1	2	3	4	5	6	7	strongly agree
6.3	The visual elements and applications are consistently used in all communication channels of our company.	strongly disagree	1	2	3	4	5	6	7	strongly agree
6.4	In our company the use of visual elements and applications is strategically planned.	strongly disagree	1	2	3	4	5	6	7	strongly agree
6.5	In our company employees are regularly trained on the correct use of the company's visual elements and applications.	strongly disagree	1	2	3	4	5	6	7	strongly agree
6.6	The correct use of visual elements and applications is a topic when inducting new personnel.	strongly disagree	1	2	3	4	5	6	7	strongly agree
6.7	In our company the visual elements and applications are developed centrally.	strongly disagree	1	2	3	4	5	6	7	strongly agree
6.8	The visual presentation of our company is no coincidence.	strongly disagree	1	2	3	4	5	6	7	strongly agree

Section 7

7.1	Our organisation can be easily identified by its visual identity.	strongly disagree	1	2	3	4	5	6	7	strongly agree
7.2	The visual identity of our organisation is messy.	strongly disagree	1	2	3	4	5	6	7	strongly agree
7.3	The visual materials in our organisation lack consistency.	strongly disagree	1	2	3	4	5	6	7	strongly agree
7.4	Our company transmits a consistent visual presentation through its facilities.	strongly disagree	1	2	3	4	5	6	7	strongly agree
7.5	Our company transmits a consistent visual presentation through its corporate communication.	strongly disagree	1	2	3	4	5	6	7	strongly agree

Section 8

8.1	In our company we have detailed guidelines for the use of music and other types of sound.	strongly disagree	1	2	3	4	5	6	7	strongly agree
8.2	An audit of our communication that involves music and other types of sound is undertaken periodically.	strongly disagree	1	2	3	4	5	6	7	strongly agree
8.3	Our company transmits a consistent auditory presentation through its facilities.	strongly disagree	1	2	3	4	5	6	7	strongly agree
8.4	In our company the use of music and other types of sound is strategically planned.	strongly disagree	1	2	3	4	5	6	7	strongly agree
8.5	The correct use of music and other types of sound is a topic when inducting new personnel.	strongly disagree	1	2	3	4	5	6	7	strongly agree
8.6	In our company the music and other types of sound are developed centrally.	strongly disagree	1	2	3	4	5	6	7	strongly agree
8.7	The music and other types of sound are consistently used in all communication channels of our company.	strongly disagree	1	2	3	4	5	6	7	strongly agree
8.8	The auditory presentation of our company is no coincidence.	strongly disagree	1	2	3	4	5	6	7	strongly agree

Section 9

9.1	The CEO of our company is very much involved when it comes to the use of music and other types of sound in our company.	strongly disagree	1	2	3	4	5	6	7	strongly agree
9.2	The CEO of our company always wants to be kept updated about the use of music and other types of sound in our company.	strongly disagree	1	2	3	4	5	6	7	strongly agree
9.3	The CEO of our company is well informed about the current activities regarding music and other types of sound in our company.	strongly disagree	1	2	3	4	5	6	7	strongly agree
9.4	The CEO of our company regularly attends meetings that deal with the use of music and other types of sound in our company.	strongly disagree	1	2	3	4	5	6	7	strongly agree

Section 10

10.1	The CEO of our company is not pushing the auditory identity topic in our company at all.	strongly disagree	1	2	3	4	5	6	7	strongly agree
10.2	The CEO of our company is very passionate when it comes to music and other types of sound.	strongly disagree	1	2	3	4	5	6	7	strongly agree
10.3	The CEO of our company regularly gives out new tasks regarding the use of music and other types of sound in our company.	strongly disagree	1	2	3	4	5	6	7	strongly agree
10.4	The CEO of our company demands regular audits of the use of our music and other types of sound.	strongly disagree	1	2	3	4	5	6	7	strongly agree
10.5	The CEO of our company makes clear that music and other types of sound have to be considered as one element of corporate identity management.	strongly disagree	1	2	3	4	5	6	7	strongly agree
10.6	The CEO of our company is of the view that music and other types of sound need to be part of our communication activities.	strongly disagree	1	2	3	4	5	6	7	strongly agree

Section 11

Info Since the management of music and other types of sound (i.e. auditory identity management) might be a somewhat novel domain for you, please allow yourself enough time for this section.

11.1	Managing the music and other types of sound of a company helps to gain differentiation from competitors.	strongly disagree	1	2	3	4	5	6	7	strongly agree
11.2	Managing the music and other types of sound of a company helps to improve the positioning of a company.	strongly disagree	1	2	3	4	5	6	7	strongly agree
11.3	Managing the music and other types of sound of a company helps to gain competitive advantage.	strongly disagree	1	2	3	4	5	6	7	strongly agree
11.4	Managing the music and other types of sound of a company helps to improve the image of a company.	strongly disagree	1	2	3	4	5	6	7	strongly agree
11.5	Managing the music and other types of sound of a company helps to improve the corporate reputation of a company.	strongly disagree	1	2	3	4	5	6	7	strongly agree
11.6	Managing the music and other types of sound of a company helps to support the corporate communication of a company.	strongly disagree	1	2	3	4	5	6	7	strongly agree
11.7	Managing the music and other types of sound of a company helps to increase the effectiveness of corporate communication of a company.	strongly disagree	1	2	3	4	5	6	7	strongly agree
11.8	Managing the music and other types of sound of a company helps to support the consistency of corporate communication.	strongly disagree	1	2	3	4	5	6	7	strongly agree
11.9	Managing the music and other types of sound of a company helps to strengthen the identification of employees with the company.	strongly disagree	1	2	3	4	5	6	7	strongly agree

Section 11 ... continued

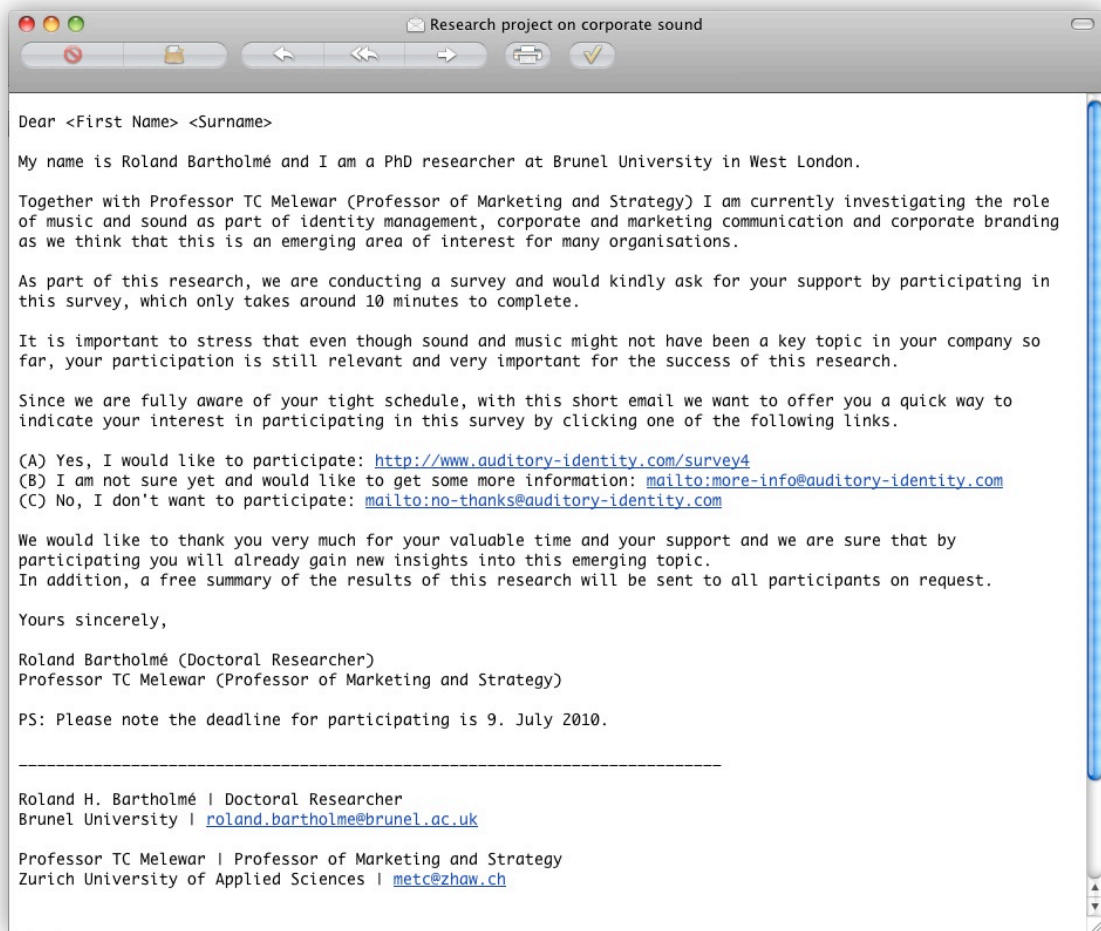
11.10	Managing the music and other types of sound of a company helps to increase the recognizability of a company.	strongly disagree	1	2	3	4	5	6	7	strongly agree
11.11	Managing the music and other types of sound of a company helps to increase the familiarity with the company.	strongly disagree	1	2	3	4	5	6	7	strongly agree
11.12	Managing the music and other types of sound of a company helps to generate trust towards the company.	strongly disagree	1	2	3	4	5	6	7	strongly agree
11.13	Managing the music and other types of sound of a company helps to influence buying behaviour of consumers.	strongly disagree	1	2	3	4	5	6	7	strongly agree

Section 12

- 12.1 Please indicate the **number of employees** in your company at the moment.
- less than 10 10 – 50 51 – 250 251 – 500
 501 – 1,000 1,001 – 3,000 3,001 – 5,000 more than 5,000
-
- 12.2 Please indicate to which **category** your company primarily belongs. (Please tick **one** option only)
- Product / Manufacturing Service Other (Please indicate):
-
- 12.3 Please tick the most appropriate option for the following statements. (Please tick **one** option only)
- Note:** In case your company belongs to a corporation or group, please answer this section from the perspective of the corporation or the group to which your company belongs.
- Our company and all companies that belong to our group are presented in the market by a single name and visual identity system.
- Our company and all companies that belong to our group are endorsed by the name of the group or the visual identity system of the group.
- Our company and all companies that belong to our group are presented in the market by individual names and visual identity systems that intentionally are not publicly related either to the group or to each other.
- None of the above statements reflect our visual identity structure. Please describe your organisation's visual identity structure here:
-
- 12.4 Please state your current position in the company:
-
- 12.5 I am regularly involved in the management of music and other types of sound in our company.
- | | | | | | | | | |
|-------------------|---|---|---|---|---|---|---|----------------|
| strongly disagree | 1 | 2 | 3 | 4 | 5 | 6 | 7 | strongly agree |
|-------------------|---|---|---|---|---|---|---|----------------|
-
- 12.6 I would like to receive a summary of this study:
- No Yes - PDF to the following Email address:
- Yes - Hard copy to the following address:
-

Thank you very much for your participation. Please use the enclosed envelope to return the questionnaire free of charge!

Appendix 6 – Email for Data Collection in Stage 2



Appendix 7 – Web-based Questionnaire for Stage 2 and Stage 3

Nationwide Research Study – Online Survey

http://www.auditory-identity.com/survey/

Nationwide Research Study Online Survey

[Start the Survey](#)

How Does Your Company Sound Like?

Sound and music can be crucial components of the communication activities of a company. As the well-known sonic logo of Intel® shows, communicating the identity of a company via sound can be very successful.

Following some **qualitative findings at companies such as British Airways, Xerox, H.J. Heinz and Interbrand**, in a next step we are now collecting quantitative data in order to further investigate this research topic.

Ultimately, this research will provide valuable insight into the emerging topic of corporate sound, which will help you as a company to better present yourself in an increasingly competitive market place.

Your Participation is Significant

It is important to stress that even though the use of sound might not have been a key topic in your organisation's communication so far, **your participation is absolutely relevant and very important** for the diversity of the data and thus for the success of this nationwide research.

In addition, it is important for us to stress that your participation is strictly voluntarily. However, the success of this research study depends entirely on the contribution of companies like yours. Therefore, we greatly appreciate your support!

Benefits for You as Respondent

Of course we are happy to send you a **free copy of the research findings** that we hope will be useful to you. *(Please indicate your request at the end of the survey)*

Confidentiality

Confidentiality of your data is very important to us. For that reason, you can be absolutely assured that:

- Neither the respondents nor the companies can be identified and no personal names will be disclosed.
- All data will be reported in an aggregated form and will be used for statistical purposes only.
- This questionnaire has been approved by the Brunel Business School Research Ethics Committee.

How to Fill in the Questionnaire

Most importantly, there are no right or wrong answers. Just tick the option that best reflects your opinion. **It only takes around 10 minutes** to complete the questionnaire.


[Start the Survey](#)


Additional Information?

If you wish any additional information in order to reach a decision about participating, please do not hesitate to contact me (rb@auditory-identity.com) or have a look at my associated research website www.auditory-identity.com.

We would like to thank you very much in advance for your valuable time and support.

Yours sincerely


Roland H. Bartholmé
(Doctoral Researcher)


Professor TC Melewar
(Professor of Marketing and Strategy)

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How to fill in this questionnaire:
Please tick the most appropriate option to indicate if you agree or disagree with the following statements (1 = strongly disagree, 4 = neither agree nor disagree, 7 = strongly agree).

1/6

Section 1 - This section aims to identify to which degree your organisation is forward thinking.

1.1	In our company we anticipate future developments that might be relevant to our business.	strongly disagree	1	2	3	4	5	6	7	strongly agree
			<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
			<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
			<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
			<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
			<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	

Section 2 - This section asks for the degree of innovation adaption in your organisation.

2.1	If one of our main competitors adopts an important innovation our company reacts immediately by adopting the innovation as well.	strongly disagree	1	2	3	4	5	6	7	strongly agree
			<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
			<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
			<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
			<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
			<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
			<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
			<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
			<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
			<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	

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Please tick the most appropriate option to indicate if you agree or disagree with the following statements (1 = strongly disagree, 4 = neither agree nor disagree, 7 = strongly agree).

2/6

Section 3 - This part investigates the degree of competition in your market environment.

3.1	Competition in our market is very strong.	strongly disagree	1	2	3	4	5	6	7	strongly agree
			<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
3.2	There are many "promotion wars" in our industry.	strongly disagree	1	2	3	4	5	6	7	strongly agree
			<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
3.3	Anything that one competitor can offer others can match easily.	strongly disagree	1	2	3	4	5	6	7	strongly agree
			<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
3.4	In our industry, we hear of a new competitive move almost every day.	strongly disagree	1	2	3	4	5	6	7	strongly agree
			<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	

Section 4 - This section investigates the role of your corporate image.

4.1	In order to differentiate from our competitors, our company strives for a corporate image that consumers consider to be unique.	strongly disagree	1	2	3	4	5	6	7	strongly agree
			<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
4.2	In our company we try to differentiate from our competitors based on our corporate image, rather than on product, service, personnel or distribution.	strongly disagree	1	2	3	4	5	6	7	strongly agree
			<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
4.3	A particular strength of our company is our corporate image that enables us to compete in the market place.	strongly disagree	1	2	3	4	5	6	7	strongly agree
			<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
4.4	Our corporate image is the main source for differentiation against our competitors.	strongly disagree	1	2	3	4	5	6	7	strongly agree
			<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	

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How to fill in this questionnaire:
Please tick the most appropriate option to indicate if you agree or disagree with the following statements (1 = strongly disagree, 4 = neither agree nor disagree, 7 = strongly agree).

3/6

Section 5 - This section investigates aspects of your organisation's communication strategy.

5.1	All communication activities of our company are planned and executed by the same person or people.	strongly disagree	1	2	3	4	5	6	7	strongly agree
			<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
			<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
			<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
			<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
			<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
			<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
			<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	

Section 6 - This section looks at the use of visual identity in your organisation.

6.1	In our company we have detailed guidelines for the use of visual elements and applications.	strongly disagree	1	2	3	4	5	6	7	strongly agree
			<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
			<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
			<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
			<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
			<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
			<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
			<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
			<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	

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How to fill in this questionnaire:
Please tick the most appropriate option to indicate if you agree or disagree with the following statements (1 = strongly disagree, 4 = neither agree nor disagree, 7 = strongly agree).

4/6

Section 7 - This part investigates the use of music and sound in your organisation.

7.1	In our company we have guidelines for the use of music and other types of sound.	strongly disagree	1	2	3	4	5	6	7	strongly agree
			<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
			<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
			<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
			<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
			<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
			<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
			<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
			<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
			<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	

Section 8 - This section investigates aspects about the role of the CEO of your company.

8.1	The CEO of our company is not pushing the corporate sound topic in our company at all.	strongly disagree	1	2	3	4	5	6	7	strongly agree
			<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
			<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
			<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
			<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
			<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
			<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
			<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
			<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
			<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	

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How to fill in this questionnaire:
Please tick the most appropriate option to indicate if you agree or disagree with the following statements (1 = strongly disagree, 4 = neither agree nor disagree, 7 = strongly agree).

5/6

Section 9 - This section investigates possible effects of corporate sound and music management.

Managing the music and other types of sound of a company helps ...

9.1	...to gain differentiation from competitors.	strongly disagree	1	2	3	4	5	6	7	strongly agree
			<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
9.2	...to gain competitive advantage.	strongly disagree	1	2	3	4	5	6	7	strongly agree
			<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
9.3	...to improve the image of a company.	strongly disagree	1	2	3	4	5	6	7	strongly agree
			<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
9.4	...to support the corporate communication of a company.	strongly disagree	1	2	3	4	5	6	7	strongly agree
			<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
9.5	...to support the consistency of corporate communication.	strongly disagree	1	2	3	4	5	6	7	strongly agree
			<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
9.6	...to strengthen the identification of employees with the company.	strongly disagree	1	2	3	4	5	6	7	strongly agree
			<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
9.7	...to increase the recognizability of a company.	strongly disagree	1	2	3	4	5	6	7	strongly agree
			<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
9.8	...to increase the familiarity with the company.	strongly disagree	1	2	3	4	5	6	7	strongly agree
			<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
9.9	...to generate trust towards the company.	strongly disagree	1	2	3	4	5	6	7	strongly agree
			<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
9.10	...to influence buying behaviour of consumers.	strongly disagree	1	2	3	4	5	6	7	strongly agree
			<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	

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How to fill in this questionnaire:
Please tick the most appropriate option to indicate if you agree or disagree with the following statements (1 = strongly disagree, 4 = neither agree nor disagree, 7 = strongly agree).

6/6

Section 10 - This final section essentially covers aspects about your company and job profile.

10.1 Please indicate the **number of employees** in your company at the moment.

less than 10
 10 - 50
 51 - 250
 251 - 500
 501 - 1,000
 1,001 - 3,000
 3,001 - 5,000
 more than 5,000

10.2 Please indicate to which **category your company** primarily belongs.

Product / Manufacturing
 Service
 Other (Please indicate):

10.3 Please tick the most appropriate option for the following statements.
Note: In case your company belongs to a corporation or group, please answer this section from the perspective of the corporation or the group to which your company belongs.

Our company and all companies that belong to our group are presented in the market by a single name and visual identity system.
 Our company and all companies that belong to our group are endorsed by the name of the group or the visual identity system of the group.
 Our company and all companies that belong to our group are presented in the market by individual names and visual identity systems that intentionally are not publicly related either to the group or to each other.
 None of the above statements reflect our visual identity structure. (Please describe your organisation's visual identity structure here)

10.4 Please state your current position in the company:

10.5 I would like to receive a summary of this study.

No
 Yes - PDF file to the following Email address:
 Yes - Hard copy to the following address:

10.6 Please feel free to state any comment that you have about this survey here:

Submit

Appendix 8

Table 9.2 – Overview of Variables and Items

Variable	Item	Full Item Name
VAR_01_01	FWTH1	Forward Thinking 1
VAR_01_02	FWTH2	Forward Thinking 2
VAR_01_03	FWTH3	Forward Thinking 3
VAR_01_04	FWTH4	Forward Thinking 4
VAR_02_01	INNOVAD1	Innovation Adoption 1
VAR_02_02 ^a	INNOVAD2 ^a	Innovation Adoption 2
VAR_02_03 ^a	INNOVAD3 ^a	Innovation Adoption 3
VAR_02_04	INNOVAD4	Innovation Adoption 4
VAR_02_05 ^a	INNOVAD5 ^a	Innovation Adoption 5
VAR_03_01	MKTCOMP1	Market Competition 1
VAR_03_02	MKTCOMP2	Market Competition 2
VAR_03_03	MKTCOMP3	Market Competition 3
VAR_03_04	MKTCOMP4	Market Competition 4
VAR_04_01	IMGDIFF1	Image Differentiation 1
VAR_04_02	IMGDIFF2	Image Differentiation 2
VAR_04_03	IMGDIFF3	Image Differentiation 3
VAR_04_04	IMGDIFF4	Image Differentiation 4
VAR_05_01	INTCOM1	Integrated Communication 1
VAR_05_02	INTCOM2	Integrated Communication 2
VAR_05_03	INTCOM3	Integrated Communication 3
VAR_05_04	INTCOM4	Integrated Communication 4
VAR_06_01	CVIM1	CVI Management 1
VAR_06_02	CVIM2	CVI Management 2
VAR_06_03	CVIM3	CVI Management 3
VAR_06_04	CVIM4	CVI Management 4
VAR_06_05	CVIM5	CVI Management 5
VAR_07_01	CAIM1	CAI Management 1
VAR_07_02	CAIM2	CAI Management 2
VAR_07_03	CAIM3	CAI Management 3
VAR_07_04	CAIM4	CAI Management 4
VAR_07_05	CAIM5	CAI Management 5
VAR_08_01 ^a	CEODRF1 ^a	CEO Driving Force 1
VAR_08_02	CEODRF2	CEO Driving Force 2
VAR_08_03	CEODRF3	CEO Driving Force 3

VAR_08_04	CEODRF4	CEO Driving Force 4
VAR_08_05	CEODRF5	CEO Driving Force 5
VAR_09_01	CONSQ1	Consequence 1 – Gaining Differentiation
VAR_09_02	CONSQ2	Consequence 2 – Gaining Competitive Advantage
VAR_09_03	CONSQ3	Consequence 3 – Improving Corporate Image
VAR_09_04	CONSQ4	Consequence 4 – Supporting Corporate Communication
VAR_09_05	CONSQ5	Consequence 5 – Supporting Consistent Corporate Communication
VAR_09_06	CONSQ6	Consequence 6 – Strengthening Identification of Employees with the Organisation
VAR_09_07	CONSQ7	Consequence 7 – Increasing Recognisability
VAR_09_08	CONSQ8	Consequence 8 – Increasing Familiarity
VAR_09_09	CONSQ9	Consequence 9 – Generating Trust
VAR_09_10	CONSQ10	Consequence 10 – Influencing Buying Behaviour
VAR_10_01	COMPSize	Company Size
VAR_10_02_A	COMPTYPE1	Company Type
VAR_10_02_B	COMPTYPE2	Company Type (<i>Text field</i>)
VAR_10_03_A	IDSTR1	Identity Structure
VAR_10_03_B	IDSTR2	Identity Structure (<i>Text field</i>)
VAR_10_04_A	JOB1	Job Position
VAR_10_04_B	JOB2	Job Position (<i>Text field</i>)
VAR_10_05_A	STUREQ1	Study Request
VAR_10_05_B	STUREQ2	Email Address (<i>Text field</i>)
VAR_10_05_C	STUREQ3	Post Address (<i>Text field</i>)
VAR_10_06	COMMENT	Comment (<i>Text field</i>)

^a Negatively worded item

Note: Variable names were used for the web-based questionnaire and associated database.

Appendix 9

Table 9.3 – Descriptive Statistics (Before Imputation)

Item	N	Minimum	Maximum	Mean	Std. Deviation
FWTH1	84	2	7	5.95	1.251
FWTH2	84	2	7	5.68	1.319
FWTH3	84	2	7	5.39	1.423
FWTH4	84	1	7	5.21	1.406
INNOVAD1	83	1	7	4.01	1.410
INNOVAD2 ^a	84	1	7	2.50	1.469
INNOVAD3 ^a	84	1	7	2.85	1.427
INNOVAD4	84	1	7	5.01	1.460
INNOVAD5 ^a	84	1	7	2.33	1.426
MKTCOMP1	84	2	7	6.12	1.091
MKTCOMP2	84	1	7	4.49	2.003
MKTCOMP3	83	1	7	4.13	1.730
MKTCOMP4	84	1	7	3.63	1.663
IMGDIFF1	84	1	7	5.25	1.520
IMGDIFF2	83	1	7	3.40	1.841
IMGDIFF3	84	1	7	4.42	1.652
IMGDIFF4	84	1	7	3.33	1.759
INTCOM1	83	1	7	4.05	2.106
INTCOM2	84	1	7	4.75	1.496
INTCOM3	84	1	7	4.86	1.592
INTCOM4	84	1	7	4.87	1.421
CVIM1	83	1	7	5.24	1.792
CVIM2	84	1	7	4.36	1.905
CVIM3	84	1	7	4.98	1.672
CVIM4	84	1	7	4.79	1.722
CVIM5	84	1	7	5.40	1.750
CAIM1	84	1	7	2.40	1.908
CAIM2	84	1	7	2.27	1.884
CAIM3	84	1	7	2.38	1.969
CAIM4	84	1	7	2.51	2.033

CAIM5	84	1	7	3.08	2.251
CEODRF1 ^a	83	1	7	5.49	1.965
CEODRF2	83	1	7	2.96	1.978
CEODRF3	83	1	7	2.12	1.648
CEODRF4	83	1	7	2.37	1.833
CEODRF5	82	1	7	2.60	1.878
CONSQ1	84	1	7	4.49	1.773
CONSQ2	84	1	7	4.06	1.731
CONSQ3	84	1	7	4.49	1.766
CONSQ4	84	1	7	4.68	1.811
CONSQ5	84	1	7	4.61	1.749
CONSQ6	83	1	7	4.16	1.749
CONSQ7	83	1	7	5.04	1.714
CONSQ8	84	1	7	4.92	1.751
CONSQ9	84	1	7	4.13	1.713
CONSQ10	81	1	7	4.02	1.753
COMPSIZE	84	1	8	4.36	2.301
COMPTYPE1	84	1	3	1.75	0.656
IDSTR1	83	1	4	1.84	0.956
JOB1	82	1	1	1.00	0.000
STUREQ1	84	1	3	1.71	0.480

^a Negatively worded item

Appendix 10

Table 9.4 – Results of Mahalanobis D^2 Analysis

Sample ID	D^2	D^2/df	Sig.
1	58.12882	1.264	0.110
2	39.91466	0.868	0.720
3	70.16001	1.525	0.010
4	38.77449	0.843	0.770
5	55.48154	1.206	0.160
6	49.79491	1.082	0.320
7	41.28353	0.897	0.670
8	47.90100	1.041	0.400
9	46.05924	1.001	0.470
10	50.76471	1.104	0.290
11	52.80887	1.148	0.230
12	37.10377	0.807	0.820
13	55.94184	1.216	0.150
14	59.38993	1.291	0.090
15	33.63748	0.731	0.910
16	50.13876	1.090	0.310
17	42.05729	0.914	0.640
18	45.74991	0.995	0.480
19	54.30229	1.180	0.190
20	56.67388	1.232	0.130
21	53.19798	1.156	0.220
22	54.40479	1.183	0.180
23	56.04352	1.218	0.150
24	30.90269	0.672	0.960
25	54.67384	1.189	0.180
26	31.30326	0.681	0.950
27	44.41401	0.966	0.540
28	28.17046	0.612	0.980
29	53.38498	1.161	0.210
30	58.33930	1.268	0.100

31	50.77516	1.104	0.290
32	53.08190	1.154	0.220
33	38.27303	0.832	0.780
34	40.55958	0.882	0.700
35	34.37985	0.747	0.900
36	52.42010	1.140	0.240
37	60.82591	1.322	0.070
38	37.30131	0.811	0.820
39	36.65255	0.797	0.840
40	54.07433	1.176	0.190
41	54.28072	1.180	0.190
42	51.71505	1.124	0.260
43	38.65439	0.840	0.770
44	45.21381	0.983	0.510
45	42.07635	0.915	0.640
46	28.24107	0.614	0.980
47	56.83370	1.236	0.130
48	28.10339	0.611	0.980
49	55.25783	1.201	0.160
50	53.92544	1.172	0.200
51	41.13828	0.894	0.680
52	53.25246	1.158	0.220
53	61.95905	1.347	0.060
54	55.38697	1.204	0.160
55	58.78354	1.278	0.100
56	30.98379	0.674	0.960
57	26.05001	0.566	0.990
58	48.52169	1.055	0.370
59	30.98614	0.674	0.960
60	29.14620	0.634	0.980
61	44.41717	0.966	0.540
62	39.50935	0.859	0.740
63	28.89246	0.628	0.980
64	43.17334	0.939	0.590

65	53.08480	1.154	0.220
66	41.40539	0.900	0.660
67	61.37759	1.334	0.060
68	49.69197	1.080	0.330
69	34.53206	0.751	0.890
70	42.29871	0.920	0.630
71	45.83719	0.996	0.480
72	42.66709	0.928	0.610
73	45.24395	0.984	0.500
74	55.31422	1.202	0.160
75	35.15942	0.764	0.880
76	43.78919	0.952	0.570
77	67.63399	1.470	0.020
78	42.62328	0.927	0.610
79	56.06525	1.219	0.150
80	42.76089	0.930	0.610
81	39.49966	0.859	0.740
82	29.30792	0.637	0.970
83	53.06608	1.154	0.220
84	26.89366	0.585	0.990

Note: The following threshold values apply: $D^2 > 81.4$, $D^2/df > 2.5$, $p < 0.01$ (Hair et al, 2007; Tabachnick and Fidell, 2007).

Appendix 11

Table 9.5 – Results of Kolmogorov-Smirnov and Shapiro-Wilks Test

Item	Kolmogorov-Smirnov ^b			Shapiro-Wilks		
	Statistics	df	Sig.	Statistics	df	Sig.
FWTH1	0.253	84	0.000	0.780	84	0.000
FWTH2	0.203	84	0.000	0.847	84	0.000
FWTH3	0.201	84	0.000	0.882	84	0.000
FWTH4	0.176	84	0.000	0.912	84	0.000
INNOVAD1	0.197	84	0.000	0.925	84	0.000
INNOVAD2 ^a	0.240	84	0.000	0.856	84	0.000
INNOVAD3 ^a	0.164	84	0.000	0.918	84	0.000
INNOVAD4	0.211	84	0.000	0.904	84	0.000
INNOVAD5 ^a	0.247	84	0.000	0.838	84	0.000
MKTCOMP1	0.290	84	0.000	0.778	84	0.000
MKTCOMP2	0.144	84	0.000	0.904	84	0.000
MKTCOMP3	0.172	84	0.000	0.932	84	0.000
MKTCOMP4	0.170	84	0.000	0.920	84	0.000
IMGDIFF1	0.201	84	0.000	0.891	84	0.000
IMGDIFF2	0.182	84	0.000	0.918	84	0.000
IMGDIFF3	0.150	84	0.000	0.940	84	0.001
IMGDIFF4	0.182	84	0.000	0.919	84	0.000
INTCOM1	0.195	84	0.000	0.884	84	0.000
INTCOM2	0.197	84	0.000	0.915	84	0.000
INTCOM3	0.214	84	0.000	0.893	84	0.000
INTCOM4	0.191	84	0.000	0.927	84	0.000
CVIM1	0.224	84	0.000	0.851	84	0.000
CVIM2	0.156	84	0.000	0.921	84	0.000
CVIM3	0.194	84	0.000	0.895	84	0.000
CVIM4	0.152	84	0.000	0.921	84	0.000
CVIM5	0.252	84	0.000	0.821	84	0.000
CAIM1	0.293	84	0.000	0.743	84	0.000
CAIM2	0.334	84	0.000	0.704	84	0.000
CAIM3	0.306	84	0.000	0.720	84	0.000

CAIM4	0.307	84	0.000	0.743	84	0.000
CAIM5	0.227	84	0.000	0.808	84	0.000
CEODRF1 ^a	0.304	84	0.000	0.761	84	0.000
CEODRF2	0.222	84	0.000	0.845	84	0.000
CEODRF3	0.324	84	0.000	0.717	84	0.000
CEODRF4	0.274	84	0.000	0.756	84	0.000
CEODRF5	0.245	84	0.000	0.805	84	0.000
CONSQ1	0.189	84	0.000	0.897	84	0.000
CONSQ2	0.212	84	0.000	0.912	84	0.000
CONSQ3	0.185	84	0.000	0.904	84	0.000
CONSQ4	0.154	84	0.000	0.912	84	0.000
CONSQ5	0.184	84	0.000	0.904	84	0.000
CONSQ6	0.188	84	0.000	0.923	84	0.000
CONSQ7	0.217	84	0.000	0.855	84	0.000
CONSQ8	0.232	84	0.000	0.857	84	0.000
CONSQ9	0.172	84	0.000	0.923	84	0.000
CONSQ10	0.167	84	0.000	0.925	84	0.000

^a Negatively worded items have been recoded.

^b Lilliefors Significance Correction.

Note: Significance level $p < 0.05$.

Appendix 12

Table 9.6 – Results of Levene Test

	Non-Metric Variables					
	COMPSIZE <i>Number of Employees</i>		COMPTYPE <i>Company Type</i>		IDSTR <i>Identity Structure</i>	
	(df1 = 7, df2 = 76)		(df1 = 2, df2 = 81)		(df1 = 3, df2 = 79)	
Metric Variables	Levene Statistic	Sig.	Levene Statistic	Sig.	Levene Statistic	Sig.
FWTH1	1.034	0.415	0.156	0.856	0.279	0.841
FWTH2	0.856	0.545	0.080	0.923	2.623	0.056
FWTH3	0.950	0.474	0.843	0.434	1.530	0.213
FWTH4	1.432	0.205	0.313	0.732	1.226	0.306
INNOVAD1	0.954	0.471	2.157	0.122	0.567	0.639
INNOVAD2 ^a	0.953	0.472	0.291	0.748	0.427	0.735
INNOVAD3 ^a	1.287	0.268	0.900	0.411	1.964	0.126
INNOVAD4	0.908	0.505	0.055	0.947	0.520	0.670
INNOVAD5 ^a	0.682	0.687	1.641	0.200	0.420	0.739
MKTCOMP1	1.011	0.431	0.351	0.705	1.484	0.225
MKTCOMP2	1.004	0.435	0.731	0.484	2.234	0.091
MKTCOMP3	1.493	0.183	0.335	0.716	1.919	0.133
MKTCOMP4	0.621	0.737	1.789	0.174	2.625	0.056
IMGDIFF1	1.121	0.359	0.843	0.434	0.732	0.536
IMGDIFF2	0.802	0.588	1.061	0.351	0.461	0.710
IMGDIFF3	0.906	0.506	0.939	0.395	1.967	0.126
IMGDIFF4	1.120	0.360	0.916	0.404	1.009	0.393
INTCOM1	2.006	0.065	0.142	0.868	0.975	0.409
INTCOM2	0.974	0.456	0.836	0.437	0.772	0.513
INTCOM3	0.611	0.745	1.954	0.148	0.147	0.931
INTCOM4	1.835	0.093	0.209	0.812	0.213	0.887
CVIM1	4.913	0.000	4.325	0.016	1.622	0.191
CVIM2	1.310	0.257	0.296	0.744	0.880	0.455
CVIM3	1.787	0.102	2.769	0.069	1.756	0.162
CVIM4	1.134	0.351	0.271	0.763	1.027	0.385

CVIM5	2.791	0.012	3.384	0.039	1.141	0.338
CAIM1	1.904	0.080	2.787	0.068	1.357	0.262
CAIM2	2.021	0.063	1.259	0.289	1.601	0.196
CAIM3	2.354	0.031	5.859	0.004	0.822	0.485
CAIM4	0.898	0.512	3.210	0.046	0.644	0.589
CAIM5	1.962	0.071	2.186	0.119	0.734	0.535
CEODRF1 ^a	2.008	0.065	3.507	0.035	3.557	0.018
CEODRF2	1.594	0.150	0.146	0.864	2.253	0.089
CEODRF3	1.934	0.076	2.676	0.075	4.037	0.010
CEODRF4	2.119	0.051	1.594	0.209	2.072	0.111
CEODRF5	2.283	0.036	2.822	0.065	1.746	0.164
CONSQ1	2.445	0.026	0.586	0.559	0.479	0.698
CONSQ2	1.405	0.216	0.347	0.708	0.040	0.989
CONSQ3	1.770	0.106	0.175	0.840	0.546	0.652
CONSQ4	3.269	0.004	0.375	0.688	1.589	0.199
CONSQ5	1.783	0.103	0.256	0.775	0.409	0.747
CONSQ6	0.529	0.810	0.694	0.503	0.938	0.426
CONSQ7	2.464	0.025	1.214	0.302	0.966	0.413
CONSQ8	2.395	0.029	1.212	0.303	0.630	0.598
CONSQ9	3.643	0.002	0.385	0.682	0.420	0.739
CONSQ10	1.321	0.252	0.218	0.804	0.077	0.972

^a Negatively worded items have been recoded.

Note: Values in bold are statistically significant at the 0.05 level or less.

Appendix 13

Table 9.7 – Results of Collinearity Statistics (Tolerance and VIF)

Coefficients ^b			
Model		Collinearity Statistics	
1	Item	Tolerance	VIF
	FWTH1	0.261	3.826
	FWTH2	0.179	5.591
	FWTH3	0.249	4.024
	FWTH4	0.339	2.948
	INNOVAD1	0.433	2.310
	INNOVAD2 ^a	0.411	2.434
	INNOVAD3 ^a	0.506	1.976
	INNOVAD4	0.357	2.804
	INNOVAD5 ^a	0.365	2.738
	MKTCOMP1	0.439	2.279
	MKTCOMP2	0.348	2.874
	MKTCOMP3	0.350	2.859
	MKTCOMP4	0.367	2.722
	IMGDIFF1	0.520	1.922
	IMGDIFF2	0.337	2.970
	IMGDIFF3	0.251	3.985
	IMGDIFF4	0.246	4.071
	INTCOM1	0.430	2.326
	INTCOM2	0.138	7.223
	INTCOM3	0.156	6.415
	INTCOM4	0.222	4.496
	CVIM1	0.273	3.661
	CVIM2	0.332	3.009
	CVIM3	0.214	4.664
	CVIM4	0.160	6.261
	CVIM5	0.282	3.551
	CEODRF1 ^a	0.373	2.684
	CEODRF2	0.314	3.188
	CEODRF3	0.102	9.795
	CEODRF4	0.065	15.438
	CEODRF5	0.120	8.363

^a Negatively worded items have been recoded.

^b Dependent Variable: Sample ID

Note: Values in bold exceed the threshold levels of < 0.10 for tolerance values and > 10 for VIF values (Hair et al, 2007:230)

Appendix 14

Table 9.8 – Outer Factor Loadings

	FWTH	INNOVAD	MKTCOMP	IMGDIFF
FWTH1	0.82			
FWTH2	0.91			
FWTH3	0.90			
FWTH4	0.84			
INNOVAD4		0.77		
INNOVAD5		0.97		
MKTCOMP1			0.67	
MKTCOMP2			0.81	
MKTCOMP3			0.44	
MKTCOMP4			0.88	
IMGDIFF2				0.84
IMGDIFF3				0.89
IMGDIFF4				0.88
	INTCOM	CVIM	CAIM	CEODRF
INTCOM2	0.92			
INTCOM3	0.95			
INTCOM4	0.90			
CVIM1		0.83		
CVIM2		0.81		
CVIM3		0.89		
CVIM4		0.94		
CVIM5		0.73		
CAIM1			0.91	
CAIM2			0.91	
CAIM3			0.94	
CAIM4			0.93	
CAIM5			0.79	
CEODRF2				0.81
CEODRF3				0.94
CEODRF4				0.96
CEODRF5				0.93

Note: Constructs related to the proposed consequences (CONSQ1-CONSQ10) were conceptualised to be measured as single-item scales, thus resulting in factor loadings of 1.

Appendix 15

Table 9.9 – Squared Latent Variable Correlations (PLS-SEM)

	FWTH	INNOVAD	MKTCOMP	IMGDIFF	INTCOM	CVIM
FWTH	0.7575					
INNOVAD	0.0644	0.7611				
MKTCOMP	0.0011	0.0476	0.5220			
IMGDIFF	0.0066	0.0047	0.0016	0.7584		
INTCOM	0.1344	0.0979	0.0001	0.0883	0.8534	
CVIM	0.0242	0.1571	0.0729	0.0983	0.2737	0.7117
CAIM	0.0271	0.0062	0.0120	0.0412	0.0583	0.0703
CEODRF	0.0016	0.0106	0.0070	0.0169	0.0075	0.0320
CONSQ1	0.0223	0.0036	0.0134	0.0140	0.0103	0.0363
CONSQ2	0.0032	0.0017	0.0241	0.0261	0.0054	0.0171
CONSQ3	0.0146	0.0050	0.0265	0.0009	0.0179	0.0321
CONSQ4	0.0102	0.0002	0.0010	0.0111	0.0026	0.0388
CONSQ5	0.0152	0.0003	0.0043	0.0052	0.0110	0.0502
CONSQ6	0.0573	0.0002	0.0413	0.0001	0.0019	0.0472
CONSQ7	0.0253	0.0009	0.0011	0.0254	0.0143	0.0315
CONSQ8	0.0136	0.0014	0.0006	0.0227	0.0061	0.0729
CONSQ9	0.0263	0.0003	0.0062	0.0000	0.0081	0.0126
CONSQ10	0.0323	0.0097	0.0125	0.0135	0.0115	0.0245
	CAIM	CEODRF	CONSQ1	CONSQ2	CONSQ3	CONSQ4
CAIM	0.8023					
CEODRF	0.3229	0.8337				
CONSQ1	0.1561	0.1698	1.0000			
CONSQ2	0.2073	0.1412	0.6961	1.0000		
CONSQ3	0.1534	0.1219	0.7556	0.6624	1.0000	
CONSQ4	0.1094	0.1096	0.7008	0.6061	0.7842	1.0000
CONSQ5	0.1126	0.1169	0.7175	0.6203	0.7771	0.8776
CONSQ6	0.0681	0.1227	0.6039	0.5186	0.5904	0.6162
CONSQ7	0.0649	0.0624	0.6732	0.5301	0.6657	0.7472
CONSQ8	0.0812	0.0768	0.6668	0.5670	0.7174	0.7752
CONSQ9	0.1522	0.1391	0.5598	0.5981	0.6574	0.6185
CONSQ10	0.0834	0.1234	0.5912	0.5549	0.5897	0.5748
	CONSQ5	CONSQ6	CONSQ7	CONSQ8	CONSQ9	CONSQ10
CONSQ5	1.0000					
CONSQ6	0.6735	1.0000				
CONSQ7	0.7935	0.5416	1.0000			
CONSQ8	0.8132	0.5708	0.9100	1.0000		
CONSQ9	0.6747	0.5355	0.5898	0.6006	1.0000	
CONSQ10	0.6300	0.4895	0.5557	0.5925	0.6212	1.0000

Note: Diagonal values in bold indicate AVE values.

Appendix 16

Table 9.10 – Cross-Loadings (PLS-SEM)

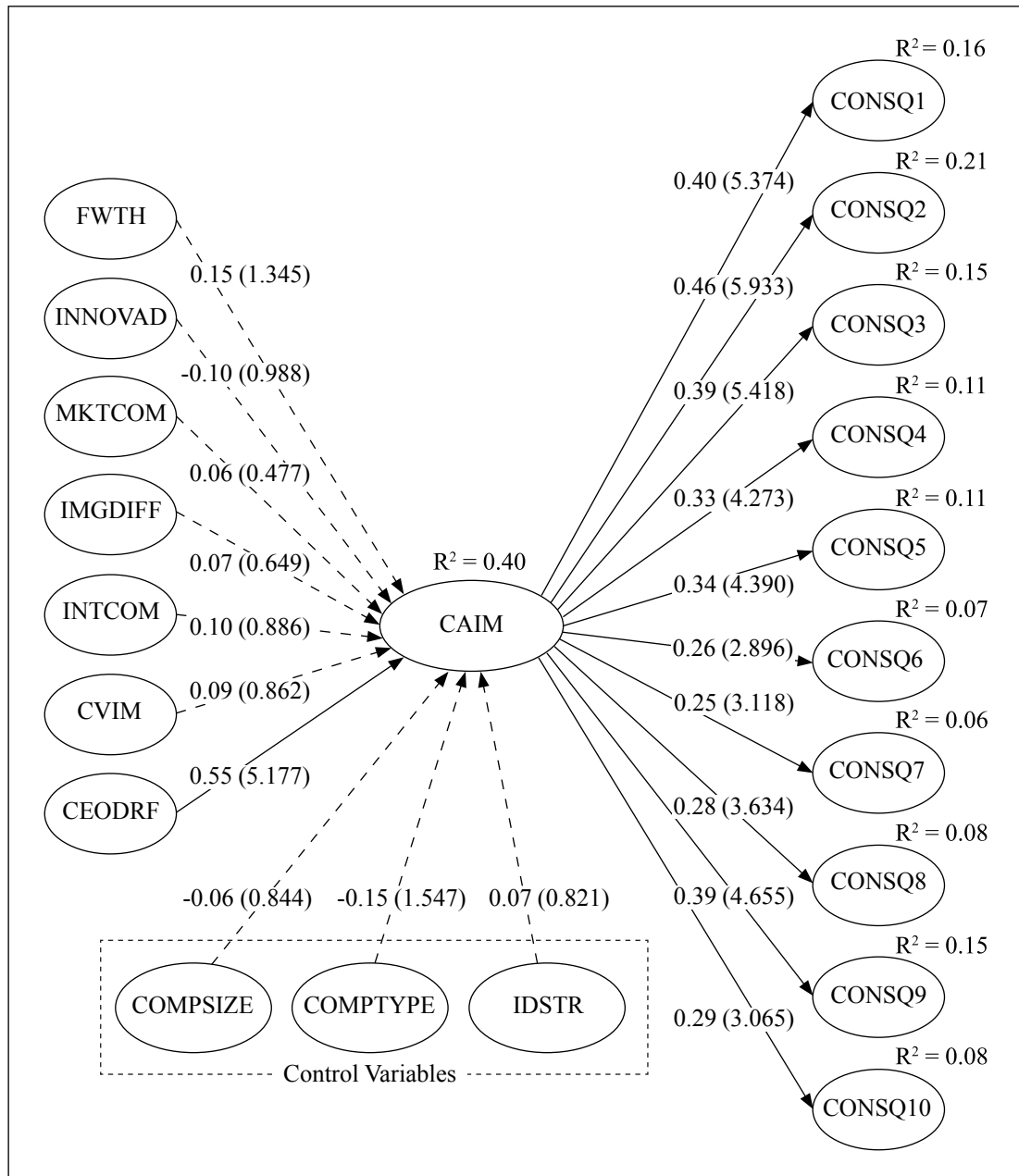
	FWTH	INNOVAD	MKTCOMP	IMGDIF	INTCOM	CVIM
FWTH1	0.8228	0.3477	0.0294	0.0724	0.3311	0.1882
FWTH2	0.9107	0.2145	0.0476	0.1891	0.3646	0.2122
FWTH3	0.9042	0.1541	0.0508	0.0099	0.2986	0.0885
FWTH4	0.8403	0.2481	-0.0119	0.0513	0.3087	0.1085
INNOVAD4	0.2937	0.7680	0.2465	-0.0384	0.3500	0.3833
INNOVAD5	0.2049	0.9656	0.1786	0.1028	0.2576	0.3507
MKTCOMP1	0.1673	0.2822	0.6735	-0.0921	0.0628	0.2807
MKTCOMP2	-0.1007	0.0179	0.8100	-0.0325	-0.0514	0.2713
MKTCOMP3	-0.0507	-0.1519	0.4421	0.1023	-0.0431	-0.0357
MKTCOMP4	0.0589	0.2650	0.8847	-0.0137	-0.0051	0.1651
IMGDIF2	0.0767	0.0734	-0.0544	0.8394	0.1370	0.1639
IMGDIF3	0.1804	0.0548	-0.0874	0.8909	0.4491	0.3968
IMGDIF4	-0.0707	0.0551	0.0464	0.8814	0.1186	0.2070
INTCOM2	0.3034	0.2711	0.0145	0.2353	0.9246	0.4802
INTCOM3	0.3686	0.3077	-0.0330	0.2760	0.9486	0.4947
INTCOM4	0.3358	0.2840	0.0014	0.3090	0.8975	0.4745
CVIM1	0.1018	0.2702	0.1796	0.2922	0.4441	0.8257
CVIM2	0.1614	0.3570	0.3015	0.2656	0.3080	0.8147
CVIM3	0.0765	0.3417	0.1914	0.2468	0.4504	0.8944
CVIM4	0.1570	0.4287	0.2298	0.3269	0.5230	0.9358
CVIM5	0.1674	0.1739	0.2630	0.1482	0.4963	0.7332
CAIM1	0.1305	0.0381	0.1034	0.0997	0.1493	0.2729
CAIM2	0.0786	0.0526	0.0601	0.1285	0.1601	0.2537
CAIM3	0.1812	0.1225	0.1137	0.2247	0.2361	0.2661
CAIM4	0.1990	0.0698	0.0920	0.2837	0.2785	0.2854
CAIM5	0.0967	0.0485	0.1349	0.0707	0.2255	0.0274
CEODRF2	-0.0984	0.1593	0.0718	0.1173	0.1666	0.1620
CEODRF3	-0.0180	0.1094	0.0570	0.0859	0.0559	0.1334
CEODRF4	0.0099	0.0298	0.0991	0.1188	0.0856	0.1478
CEODRF5	-0.0562	0.0985	0.0760	0.1567	0.0284	0.2161
CONSQ1	-0.1493	0.0600	0.1156	0.1181	-0.1016	0.1906
CONSQ2	-0.0566	-0.0418	0.1553	0.1615	-0.0736	0.1306
CONSQ3	-0.1208	0.0705	0.1628	0.0302	-0.1337	0.1792
CONSQ4	-0.1012	0.0129	0.0323	0.1055	-0.0513	0.1970
CONSQ5	-0.1232	0.0172	0.0658	0.0724	-0.1050	0.2240
CONSQ6	-0.2394	0.0153	0.2031	0.0088	-0.0441	0.2174
CONSQ7	-0.1590	0.0296	-0.0333	0.1594	-0.1197	0.1774
CONSQ8	-0.1164	0.0380	0.0252	0.1505	-0.0783	0.2700
CONSQ9	-0.1621	-0.0183	0.0786	0.0015	-0.0901	0.1124
CONSQ10	-0.1797	-0.0983	0.1117	0.1162	-0.1074	0.1566
	CAIM	CEODRF	CONSQ1	CONSQ2	CONSQ3	CONSQ4
FWTH1	0.0741	0.0212	-0.1198	-0.1156	-0.1257	-0.1239
FWTH2	0.1198	-0.0380	-0.1537	-0.0601	-0.1542	-0.0993

FWTH3	0.1809	-0.0615	-0.1294	-0.0781	-0.0820	-0.0813
FWTH4	0.1533	-0.0270	-0.1198	0.0244	-0.0863	-0.0720
INNOVAD4	0.0352	-0.0003	-0.0069	-0.0432	0.0725	0.0060
INNOVAD5	0.0866	0.1318	0.0794	-0.0358	0.0606	0.0140
MKTCOMP1	0.0540	-0.0335	-0.0553	0.0090	0.0195	-0.0901
MKTCOMP2	0.0833	0.2009	0.2544	0.2591	0.2690	0.1700
MKTCOMP3	0.0089	-0.0716	-0.1296	-0.0670	-0.0905	-0.0879
MKTCOMP4	0.1131	0.0269	0.0618	0.0956	0.0990	-0.0159
IMGDIF2	0.1335	0.1344	0.1295	0.1370	0.0220	0.0967
IMGDIF3	0.2124	0.0561	0.0819	0.1261	0.0244	0.0936
IMGDIF4	0.1686	0.1701	0.1095	0.1636	0.0323	0.0870
INTCOM2	0.1905	0.0715	-0.1397	-0.1152	-0.1584	-0.0878
INTCOM3	0.2572	0.1018	-0.0604	-0.0275	-0.0906	-0.0161
INTCOM4	0.2122	0.0620	-0.0939	-0.0752	-0.1326	-0.0493
CVIM1	0.1414	0.1817	0.1306	0.0735	0.1120	0.1286
CVIM2	0.1984	0.0865	0.1938	0.1250	0.1839	0.1943
CVIM3	0.2173	0.1914	0.1909	0.1421	0.1917	0.2163
CVIM4	0.3306	0.1867	0.1767	0.1417	0.1734	0.1862
CVIM5	0.1283	0.0823	0.0792	0.0118	0.0444	0.0567
CAIM1	0.9073	0.4625	0.2756	0.3282	0.2874	0.1775
CAIM2	0.9086	0.4862	0.2985	0.3348	0.2815	0.2026
CAIM3	0.9400	0.5662	0.3809	0.4386	0.3893	0.3388
CAIM4	0.9288	0.5773	0.4747	0.5356	0.4731	0.4444
CAIM5	0.7852	0.3859	0.2433	0.3049	0.2139	0.1958
CEODRF2	0.4170	0.8123	0.3368	0.3121	0.3069	0.2538
CEODRF3	0.5470	0.9449	0.3032	0.2736	0.2586	0.2323
CEODRF4	0.5725	0.9570	0.4060	0.3788	0.3514	0.3394
CEODRF5	0.5225	0.9307	0.4595	0.4086	0.3621	0.3799
CONSQ1	0.3950	0.4121	1.0000	0.8343	0.8692	0.8371
CONSQ2	0.4552	0.3758	0.8343	1.0000	0.8139	0.7785
CONSQ3	0.3917	0.3491	0.8692	0.8139	1.0000	0.8856
CONSQ4	0.3307	0.3311	0.8371	0.7785	0.8856	1.0000
CONSQ5	0.3355	0.3419	0.8471	0.7876	0.8815	0.9368
CONSQ6	0.2609	0.3503	0.7771	0.7201	0.7684	0.7850
CONSQ7	0.2548	0.2497	0.8205	0.7281	0.8159	0.8644
CONSQ8	0.2849	0.2772	0.8166	0.7530	0.8470	0.8805
CONSQ9	0.3902	0.3730	0.7482	0.7734	0.8108	0.7864
CONSQ10	0.2888	0.3513	0.7689	0.7449	0.7680	0.7582
	CONSQ5	CONSQ6	CONSQ7	CONSQ8	CONSQ9	CONSQ10
FWTH1	-0.1408	-0.2453	-0.1152	-0.0789	-0.1658	-0.1041
FWTH2	-0.1494	-0.2807	-0.1678	-0.1161	-0.1998	-0.1782
FWTH3	-0.0921	-0.2213	-0.1377	-0.1076	-0.1746	-0.1755
FWTH4	-0.0780	-0.1230	-0.1304	-0.0954	-0.0468	-0.1455
INNOVAD4	0.0066	-0.0197	0.0141	0.0522	-0.0777	-0.1183
INNOVAD5	0.0193	0.0275	0.0320	0.0274	0.0082	-0.0775
MKTCOMP1	-0.0762	-0.0423	-0.1499	-0.0578	-0.0922	-0.1161
MKTCOMP2	0.1792	0.3529	0.0837	0.1286	0.1497	0.2465
MKTCOMP3	-0.0881	-0.0027	-0.2139	-0.1802	-0.1359	-0.0535
MKTCOMP4	0.0324	0.1338	-0.0345	-0.0066	0.0891	0.0835

IMGDIFF2	0.0638	0.0321	0.1661	0.1194	0.0449	0.1615
IMGDIFF3	0.0573	-0.0119	0.1178	0.1371	-0.0706	0.0449
IMGDIFF4	0.0705	0.0131	0.1454	0.1344	0.0573	0.1256
INTCOM2	-0.1347	-0.0532	-0.1430	-0.1185	-0.0952	-0.0842
INTCOM3	-0.0723	-0.0565	-0.0823	-0.0346	-0.0593	-0.0458
INTCOM4	-0.0937	-0.0106	-0.1163	-0.0771	-0.1018	-0.1778
CVIM1	0.1425	0.1463	0.1355	0.2344	0.0410	0.1251
CVIM2	0.1763	0.1925	0.1307	0.2294	0.0261	0.1012
CVIM3	0.2522	0.2083	0.1637	0.2257	0.1568	0.1944
CVIM4	0.2317	0.2129	0.2059	0.2777	0.1607	0.1549
CVIM5	0.0762	0.1239	0.0524	0.1330	0.0022	0.0465
CAIM1	0.2214	0.1934	0.1306	0.1617	0.3079	0.1873
CAIM2	0.2267	0.1622	0.1572	0.1640	0.3023	0.2168
CAIM3	0.3587	0.2378	0.2969	0.3204	0.4315	0.3080
CAIM4	0.4265	0.3500	0.3655	0.4082	0.4234	0.3751
CAIM5	0.1400	0.1378	0.0368	0.0599	0.1784	0.0790
CEODRF2	0.2375	0.3537	0.2123	0.2581	0.3877	0.3233
CEODRF3	0.2645	0.2421	0.1635	0.1799	0.3249	0.2597
CEODRF4	0.3522	0.3183	0.2456	0.2704	0.3395	0.3292
CEODRF5	0.3844	0.3825	0.2935	0.3119	0.3274	0.3799
CONSQ1	0.8471	0.7771	0.8205	0.8166	0.7482	0.7689
CONSQ2	0.7876	0.7201	0.7281	0.7530	0.7734	0.7449
CONSQ3	0.8815	0.7684	0.8159	0.8470	0.8108	0.7680
CONSQ4	0.9368	0.7850	0.8644	0.8805	0.7864	0.7582
CONSQ5	1.0000	0.8207	0.8908	0.9018	0.8214	0.7937
CONSQ6	0.8207	1.0000	0.7360	0.7555	0.7318	0.6996
CONSQ7	0.8908	0.7360	1.0000	0.9539	0.7680	0.7454
CONSQ8	0.9018	0.7555	0.9539	1.0000	0.7750	0.7698
CONSQ9	0.8214	0.7318	0.7680	0.7750	1.0000	0.7882
CONSQ10	0.7937	0.6996	0.7454	0.7698	0.7882	1.0000

Appendix 17

Figure 9.1 – Structural Model Including Control Variables



Note: Degrees of freedom = 5000; Values indicate path coefficients; Values in parentheses indicate t-values; Solid lines indicate significant relationships ($p < 0.01$); Dotted lines indicate non-significant relationships ($p < 0.01$).