

CHAPTER 5

PROBLEM STATEMENT AND FORMULATION OF HYPOTHESES

5.1 INTRODUCTION

Chapter 2 explored the theoretical foundation of the topic under investigation, and Chapters 3 and 4 provided an overview of the specific literature upon which the research hypotheses in this study are based. In this chapter, the focus shifts toward the empirical study. Here the problem statement is discussed and specific research hypotheses are formulated. A rationale is given to place each hypothesis in perspective in relation to the set objectives.

5.2 PROBLEM STATEMENT

There is sufficient evidence to suggest that consumers world-wide recognise a problem with regard to a lack of information privacy and control over personal information once information has been divulged to organisations. Consumer attitudes about privacy have been researched in various countries and have been addressed in public opinion surveys in a number of disciplines, including law, political science, sociology and psychology. Several studies have documented high levels of concern among consumers regarding their information privacy. Consumer privacy concerns are seen as an issue of high intensity expressed by more than three quarters of American consumers in 2001 (Westin, 2002:16). Louis Harris & Associates and Dr Alan Westin conducted a Privacy Concerns and Consumer Choice Survey in 1998, analysing privacy attitudes and concerns. The conclusion from this study was that concern over threats to personal privacy remains at a very high level, and is increasing (Louis Harris & Associates & Westin, 1998:ix). A Wall Street Journal/NBC News poll of 2 025 adults has also found that the loss of personal privacy was the number one concern of Americans as the twenty-first century approached (EPIC, 2002:11).

The findings of studies in Japan, Canada, the United Kingdom and Germany have indicated that consumers in these countries were also concerned about information privacy (Maynard & Taylor, 1996:41; Campbell, 1997:51; Gallup, 2000:49; Harris Interactive & Westin, 2000:5). A 1998 survey conducted by the Georgia Institute of Technology's Graphic, Visualization & Usability Center found that 77 per cent of respondents reported that privacy was more important to them than convenience (EPIC, 2002:14). Turner and Varghese (2002:11) reviewed the results of five major consumer privacy surveys conducted in 2001. Their report shows that recent consumer surveys were consistent in finding high levels of concern about privacy. Nearly two-thirds of all consumers who were very concerned about their privacy also conveyed a great deal of concern about the potential misuse of their information by organisations (Harris Interactive, 2002b:100).

Marketing is growing and expanding into global markets. Much of this expansion is due to rapid improvements in technology, making certain marketing practices, especially direct marketing, more feasible (Milne, Beckman & Taubman, 1996:22). The Internet has grown considerably during the past decade, particularly in respect of its use as a tool for market exchange. This rapid growth has raised concern regarding the collection and dissemination of consumer information by marketers who participate in online activities (Miyazaki & Fernandez, 2001:27). Recently, several studies have been conducted to determine privacy concerns in an online environment. Sheehan and Hoy (1999:40) have demonstrated that as individuals' concerns with privacy increased, the frequency with which they registered for websites decreased, and that they were more likely to provide incomplete information to websites. A survey of 10 000 web users conducted by the Georgia Institute of Technology concluded that privacy overshadowed censorship as the most important issue facing the Internet (Machlis, 1997:2). Other studies have confirmed that privacy is online consumers' biggest concern (Tweney, 1998:66; Udo, 2001:169).

Research by Hoffman, Novak and Peralta (1999:80) has also revealed that consumers believe that their lack of control over the access that web merchants have to their personal information during online transactions reduces the trust between themselves and the organisations on the Internet. Seventy-eight per cent of e-mail users surveyed said they were concerned about the privacy of personal information that they give out on the Internet (Gallup, 2001:51), and several studies have indicated that an average of 70 per cent of American consumers are concerned about threats to their personal privacy when using the Internet (Harris Interactive, 2002a:2; Tedeschi, 2002a; Jupiter Media Metrix, 2002). A study by Harris Interactive (2002b:13) at the end of 2001 concluded that both on and off the Internet, consumers are more concerned about privacy than they had been previously (over the past two years), and they are much more assertive in taking steps to protect their privacy.

While several international studies have shown strong evidence indicating different dimensions of information privacy concerns, similar findings do not exist in South Africa. Although privacy policies and practices are of great concern in the international arena, there is no research evidence that information privacy is an issue or a matter of concern to South African consumers. The research problem can thus be formulated as a **lack of knowledge and understanding of information privacy concerns among South African consumers**. On the basis of this research problem, several research objectives can be formulated and are discussed in the following section.

5.3 RESEARCH OBJECTIVES

Consumers' concerns regarding the privacy issue are very real. For marketers, the challenge is to balance the advantages of using consumers' personal information for marketing purposes with consumers' information privacy concerns (Milne & Gordon, 1994:46). In order to do this effectively, marketers have to understand the consumer's concerns in a privacy sensitive commercial environment, since consumer privacy concerns can potentially turn long-term relationships into short-term transactional exchanges (Prabhaker, 2000:161). The primary objective (PO) of this study is to

identify and explore the information privacy concerns of South African consumers in a commercial environment.

In the past decade, many researchers have recognised that consumer privacy concern is a multi-faceted issue (Wang & Petrison, 1993:17; Campbell, 1997:45; Taylor, 2002:20). This has been corroborated by empirical research. Given the multi-dimensional nature of information privacy concerns, several secondary objectives were set to determine the level of concern among South African consumers about privacy.

The first secondary objective (SO1) is to determine the underlying dimensions of information privacy concern. This objective was formulated to support the primary objective by **identifying** the different information privacy concerns of consumers. Kelman (1977:169) referred to privacy as 'the freedom of the individual to pick and choose for himself the time and circumstances under which, and most importantly, the extent to which, his attitudes, beliefs, behavior and opinions are to be shared with or withheld from others'. A thorough understanding of consumers' privacy concerns requires a detailed examination of the beliefs, attitudes, behavioural intentions and expectations that underlie those concerns. The focus of the research was therefore to explore the concern of consumers about different aspects of information privacy pertaining to data collection, data storage, data use, data disclosure and solicitation.

A better understanding of the multi-dimensional structure of information privacy will enable marketers to understand information privacy and privacy invasion, as well as to predict the types of situations that can potentially create privacy or invasion experiences (Laufer & Wolfe, 1977:25). As early as 1983, Stone *et al.* (1983:459) realised that information privacy has several dimensions. They compared information privacy values, beliefs and attitudes across several types of organisations. Their results revealed significant differences among the various organisational types regarding information privacy values, beliefs and attitudes. Nowak and Phelps (1992:34) focused their investigation on consumers' information-related knowledge of and beliefs about information privacy. Their results indicated that privacy was an important concern, that

many consumers were not very knowledgeable about specific direct marketing practices, that consumer concern was affected by the type of practice and the specificity of information, and that most consumers favoured restrictions on the gathering and use of personal information.

Culnan (1993:341) measured differences in attitudes between consumers who objected to certain uses of personal information and those who did not object. She reported that consumers with positive attitudes were less concerned about privacy, perceived shopping by mail as beneficial and had coping strategies for dealing with unwanted mail. Wang and Petrison (1993:12) found that consumers were more concerned about situations where their personal and financial records were sold to other organisations without their consent, than they were about relationship marketing situations where an organisation collects and uses information to contact its own customers repeatedly. The same authors conducted a follow-up study in 1995, indicating different dimensions of consumer privacy among American and British consumers (Petrison & Wang, 1995:19). In their study, Americans expressed more concern about solicitations as privacy invasion, while the Britons were primarily concerned with the collection and exchange of consumer information. Findings from a study by Taylor, Vassar and Vaught (1995:45) demonstrated that consumers did not believe that their privacy rights were adequately protected by law and business practices. The Privacy Concerns and Consumer Choice Survey in 1998 (Louis Harris & Associates & Westin, 1998:ix) reported that most people felt that organisations asked for too much personal information, and that consumers had lost control over how this information was used. Moreover, few people expressed strong confidence that organisations were using consumers' personal information properly. A follow-up study showed that the vast majority of Internet users were very concerned about threats to their personal privacy online, despite the fact that only a very small portion reported that they had actually been victims of online privacy invasion (Louis Harris & Associates & Westin, 1998a).

Phelps, Nowak and Ferrell (2000:27) examined consumers' information concern behaviour consistency and their perceptions regarding the exchange relationships with

marketers that gathered and used personal information. Their findings indicated that public policy and self-regulatory efforts to alleviate consumer privacy concerns should provide consumers with more control over the initial gathering and subsequent dissemination of personal information. The IBM-Harris Multi-National Consumer Privacy Survey (Harris Interactive and Westin, 2000:5) showed that significant numbers of American, British and German consumers said that they were victims of privacy invasions by organisations, and that the majority of consumers voiced concern about the possible misuse of their personal information. Harris Interactive (2001a, 2001b, 2001c) conducted a series of three surveys on consumer privacy attitudes and behaviours. Their findings revealed relative consistency over the three surveys, indicating that consumers were willing to provide both online and offline companies with basic information, but that they were more protective of personal information and less comfortable sharing more sensitive information. A survey commissioned by NCR and BMRB Financial, European Union, indicated that 60 per cent of consumers were satisfied when organisations used their personal data in marketing, as long as they received personalised services and tangible rewards in return (Darby, 1999:2). Another study by Jupiter Research confirmed this attitude and reported that 82 per cent of Internet users would give personal information to new shopping sites in exchange for the chance to win something in a competition (Tedeschi, 2002a).

This study is an extension of the above-mentioned previous studies, and focuses on different aspects of consumer information privacy. Previous studies have examined some dimensions underlying information privacy concerns, but the dimensions differed from study to study, and a common framework relating to these dimensions has not yet emerged. Since the theoretical base on information privacy is very fragmented, and few empirical tests exist on the dimensions of concern regarding information privacy, several constructs have been identified from the theory discussed in Chapters 2, 3 and 4. From the literature, eight main dimensions have been identified:

- data collection (Chapter 3, Section 3.4.1);
- data storage and security (Chapter 3, Sections 3.4.2 and 3.4.5);
- data use (Chapter 3, Section 3.4.4);

- data disclosure and dissemination (Chapter 3, Section 3.4.6);
- solicitation (Chapter 3, Section 3.3.1);
- privacy protection policies (Chapter 3, Section 3.5);
- legislation and government protection (Chapter 2, Section 2.6); and
- behavioural intentions (Chapter 4, Section 4.7.2.3).

The first five dimensions were addressed from a consumer perspective and related to consumers' beliefs and attitudes (addressed in Chapter 4, Sections 4.7.2.1 and 4.7.2.2). The first secondary objective was thus set with the aim of measuring South African consumers' beliefs, attitudes, behavioural intentions and expectations regarding data collection, data storage, data use, data disclosure and solicitation. The underlying dimensions of consumers' information privacy concerns were uncovered by means of factor analysis. Thereafter, the other secondary objectives were addressed in support of the primary objective.

The remainder of the secondary objectives aimed to **explore** the different information privacy concerns in relation to specific consumer behaviour activities. Hypotheses were formulated for each secondary objective to enable empirical testing of the issues at hand. The different hypotheses are discussed in full in the next section. The remaining secondary objectives are listed below for the sake of convenience (also mentioned previously in Chapter 1, Section 1.4.2):

- SO2: To establish differences between consumers' manifest behaviours to protect their privacy and their privacy concerns;
- SO3: To establish differences between consumers in terms of their personal experiences of invasions of privacy and their privacy concerns;
- SO4: To establish the dependency between gender and personal experiences of invasions of privacy;
- SO5: To establish differences between consumers in terms of their knowledge about information protection practices and their privacy concerns;
- SO6: To establish the dependency between age and knowledge about information protection practices;

- SO7: To establish the dependency between level of education and knowledge about information protection practices;
- SO8: To establish differences between consumers in terms of their Internet usage and their privacy concerns;
- SO9: To establish differences between consumers in terms of their direct purchasing behaviour and their privacy concerns;
- SO10: To classify consumers into different privacy sensitive segments based on their general privacy concerns;
- SO11: To identify differences between consumers in terms of their demographic characteristics and their privacy concerns.

The research hypotheses will now be formulated and discussed.

5.4 RESEARCH HYPOTHESES

Based on the literature review presented in Chapter 2, the theoretical foundations of consumer information privacy discussed in Chapter 3, and the overview of consumer behaviour presented in Chapter 4, as well as the research objectives, it is now possible to formulate and state specific hypotheses to be tested in the empirical study. The empirical research addresses selected aspects regarding consumer information privacy. The identification of the underlying dimensions of consumer information privacy concerns (SO1), serves as the basis to test the hypotheses formulated to address the rest of the secondary objectives. The different hypotheses formulated for testing are discussed below.

5.4.1 Hypothesis 1

Consumers may engage in various protective behaviours, believing that they can manage their information and thus minimise the potential consequences of supplying this information. The crucial element of information management in terms of planning behaviour is that the consumer is often unable to predict the nature of that which has to

be managed (Laufer & Wolfe, 1977:36). The results of the Privacy Concerns and Consumer Choice survey (Louis Harris & Associates & Westin, 1998:x) indicated that consumers' concern about how organisations use their personal information manifested in privacy protection behaviours. The IBM-Harris Multi-National Consumer Privacy Survey (Harris Interactive & Westin, 2000:11) compared Internet users and non-users in terms of six privacy protective behaviours in three different countries. The results showed several differences in behaviour between Internet users and non-users, with Internet users being more prone to taking protective action. Both groups have, however, refused to provide information which they regard as not really needed or too personal.

Sheehan and Hoy's study (1999:40) reported several significant correlations between consumers' online privacy concerns and their behaviour. One such form of behaviour is the request to remove personal information from mailing lists. Phelps *et al.* (2000:35) have found that previous name removal behaviour had a strong correlation to people's privacy concern level. A study by Harris Interactive (2002b:13) concluded that consumers were becoming much more assertive in taking steps to protect their privacy. Nearly a third of all consumers were in the high privacy assertiveness category, suggesting that they are very active in protecting their privacy (Harris Interactive, 2002b:101). The results of five major consumer privacy surveys conducted in 2001 were reviewed by Turner and Varghese (2002:11), who reported a disconnection between consumer preferences and behaviour. Conflicting results have also been reported regarding protective behaviour in respect of privacy concerns and gender. A study by Harris Interactive (2002b:77) found that women are more likely than men to change their behaviour if they were confident that an organisation would honour its privacy policies. The findings of a study by Sheehan (1999:25) indicated the opposite, namely that men were likely to adopt behaviours to protect their privacy when they become concerned, and that women rarely adopted such behaviours.

A secondary objective was set **to investigate whether there are differences between consumers' manifest behaviours to protect their privacy and their privacy concerns (SO2)**. The following null and alternative research hypotheses were

formulated in the context of the findings of the above-mentioned studies and the stated objective:

H₀: There is no significant difference between consumers in terms of their protective behaviour and their privacy concerns.

H₁: There is a significant difference between consumers in terms of their protective behaviour and their privacy concerns.

5.4.2 Hypotheses 2a and 2b

Previous empirical research has suggested that an individual's concern for privacy is likely to vary over the course of his or her lifetime, based on personal experiences. When consumers have had multiple previous negative experiences with data inaccuracies, they become more reluctant to provide subsequent information (Vidmar & Flaherty, 1985:100; Campbell, 1997:46). A significant positive correlation between direct negative personal experiences and consumer concerns about data collection and errors was reported by Campbell (1997:51). The findings of studies by Louis Harris & Associates and Westin (1998b:ix) and Harris Interactive and Westin (2000:2) indicate that between 20 and 40 per cent of respondents have been victims of an invasion of privacy by an organisation. Louis Harris & Associates and Westin (1998a) reported that 81 per cent of Internet users were concerned about threats to their personal privacy while online, although only six per cent have actually been victims of an online privacy invasion. Internet users in the USA, the United Kingdom and Germany reported a higher incidence of privacy invasions than Internet non-users in these countries (Harris Interactive & Westin, 2000:3). Among American and British consumers, males were more likely than females to report being a victim of a privacy invasion. The gender gap is even more pronounced in Germany, where 35 per cent of male and 22 per cent of female respondents claimed that they had been victims of a privacy invasion by an organisation (Harris Interactive & Westin, 2000:5). Another study found that 45 per cent of Americans think that shopping online threatens their personal privacy (TNS Intersearch, 2001:44).

The above-mentioned findings indicate relationships between negative personal experiences and privacy concerns, as well as gender and negative personal experiences. Secondary objectives were set **to establish differences between consumers in terms of their personal experiences of invasions of privacy and their privacy concerns (SO3), and to establish the dependency between gender and personal experiences of invasions of privacy (SO4)**. From this the following null and alternative hypotheses were formulated:

H₀: There is no significant difference between consumers who have been victims of invasions of privacy and consumers who have not been victims of invasions of privacy in terms of their privacy concerns.

H_{2a}: There is a significant difference between consumers who have been victims of invasions of privacy and consumers who have not been victims of invasions of privacy in terms of their privacy concerns.

H₀: Being a victim of invasion of privacy is independent of gender.

H_{2b}: There is a dependency between being a victim of invasion of privacy and gender.

5.4.3 Hypotheses 3a, 3b and 3c

Consumers' knowledge level of actual privacy policies and practices may affect their privacy concerns, although opposing arguments have been presented about this effect. When individuals have extended knowledge about the collection and use of personal information, they tend to be more concerned about information privacy practices. At the same time, however, if consumers understand that the data collected has the potential to build a relationship in which they can participate in the creation of goods and services, their privacy concerns might be diminished or superseded by their desire to participate (Campbell, 1997:46). The characteristics of consumers who are aware of name removal procedures versus those who are unaware were investigated by Culnan (1995:12-15). She suggests that a consumer information problem exists in direct

marketing practices because the majority of her respondents believe that it is important to be able to remove their names from mailing lists if they choose. However, these respondents claim to be unaware of any name removal options. The results showed that consumers who were not aware of name removal procedures were less likely to have shopped by mail and were in the younger age category (18-29 years old). Follow-up analyses found that education was also a variable that discriminated between the two groups, with the less educated group being unaware of name removal procedures.

Based on the above findings and the secondary objectives to establish **differences between consumers in terms of their knowledge about information protection practices and their privacy concerns (SO5)**, the **dependency between age and knowledge about information protection practices (SO6)**, and the **dependency between level of education and knowledge about information protection practices (SO7)**, the following null and alternative hypotheses were set:

H₀: There is no significant difference between consumers in terms of their level of awareness of name removal procedures and their privacy concerns.

H_{3a}: There is a significant difference between consumers in terms of their level of awareness of name removal procedures and their privacy concerns.

H₀: The level of awareness of name removal procedures is independent of age.

H_{3b}: There is a dependency between the level of awareness of name removal procedures and age.

H₀: The awareness of name removal procedures is independent of levels of education.

H_{3c}: There is a dependency between the awareness of name removal procedures and levels of education.

5.4.4 Hypothesis 4

As Internet usage increases due to the efficiencies of new technological developments and increased online commerce, the increased traffic of personal consumer information will allow marketers to gain greater expertise in the evaluation of consumer purchase behaviours. This may alter consumers' privacy and security perceptions that are likely to limit online retailing in the long-term (Miyazaki & Fernandez, 2001:38). The findings of a study by Hoffman *et al.* (1999:80) indicated that there was a lack of faith between most organisations and consumers on the Web. In essence, consumers simply do not trust most Web providers enough to engage in relationship exchanges with them involving their money and personal information. Research has also revealed that this lack of trust originated from the fact that consumers felt they lack control over the access that web merchants have to their personal information during the online navigation process, and that privacy concerns tended to influence buyer-seller relationships negatively (Prabhaker, 2000:161).

The IBM-Harris Multi-National Consumer Privacy Survey (Harris Interactive & Westin, 2000:10) examined different attitudes toward the privacy practices of Internet users and non-users. The survey explored whether familiarity with the Internet affects consumer confidence and concerns about privacy practices. The results suggested that Internet users tend to be more privacy conscious, leading to more privacy protective behaviours from them. The findings of a study by Miyazaki and Fernandez (2001:38) showed that higher levels of Internet experience may lead to lower risk perceptions regarding online shopping and fewer specific concerns regarding system security. However, more concerns were found regarding online privacy. The results suggested that increased Internet experience alone did not appear to diminish privacy concerns (Lebo, 2001:65). The UCLA Internet Reports indicated that the issue of privacy continued to be the greatest concern about the Internet among both users and non-users, and respondents expressed considerable concern that using the Internet created risks to individual privacy.

Since the above-mentioned findings indicated different associations with privacy concerns, one of the secondary objectives aimed **to establish differences between consumers in terms of their Internet usage and their privacy concerns (SO8)**. From this the following null and alternative hypotheses were formulated:

H₀: There is no significant difference between Internet users and Internet non-users in terms of their privacy concerns.

H₄: There is a significant difference between Internet users and Internet non-users in terms of their privacy concerns.

5.4.5 Hypothesis 5

Consumers vary in their beliefs and perceptions regarding direct marketing. These perceptions can influence whether and to what extent consumers are concerned about privacy. Milne and Gordon (1994:52), for example, have found that although respondents had favourable attitudes toward direct mail, many desired lower mail volume and improved targeting and advertising mail. There is some evidence that direct marketing users differ from non-users in their personal information and privacy concerns. An analysis of the 1994 Harris-Equifax data (Phelps *et al.*, 2000:30), for example, indicated that people who had made a direct mail purchase in the preceding year were slightly more concerned about threats to their privacy; were more likely to have refused to provide an organisation with personal information; and were more likely to have privacy concerns when a profile of their viewing and buying patterns was developed. Some researchers have suggested that as individuals are exposed more to direct marketing efforts, their concerns about personal privacy may become better articulated and perhaps increase (Campbell, 1997:45). For example, Milne *et al.* (1996:25) found that in Argentina (a country where direct marketing is in its infancy), only a small percentage of consumers were concerned about information privacy. In markets relatively developed in direct marketing, as is the case in the USA, consumers have sufficient experience and knowledge of direct marketing practices to have specific concerns. There is evidence that attitudes toward direct marketing and consumer

privacy are shaped by the level of direct response activity of the individual (Milne *et al.*, 1996:24). One of the steps individuals can take as a result of privacy concerns is to restrict their purchases of goods through direct marketing (Campbell, 1997:47).

The South African direct marketing industry is not as developed as that in the USA. There are no published research findings on whether direct marketing experience and knowledge by consumers will increase privacy concerns among South Africans. This fact has inspired the objective **to establish the differences between consumers in terms of their direct purchasing behaviour and their privacy concerns (SO9)**. The following null and alternative hypotheses were formulated to address this secondary objective:

H₀: There is no significant difference between direct shoppers and non-direct shoppers in terms of their privacy concerns.

H₅: There is a significant difference between direct shoppers and non-direct shoppers in terms of their privacy concerns.

5.4.6 Hypothesis 6

Alan Westin and Louis Harris & Associates created a Privacy Segmentation Index in 1995. This Index classified the American public to be divided into three privacy segments. The first segment was people with very high concern about privacy, labelled the 'Privacy Fundamentalists'. According to the latest results, this segment represents about 25 per cent of the American public (Harris Interactive, 2002b:20). This group regards privacy as something with an especially high value. They reject the claims of many organisations' need (or entitlement) to obtain personal information for their business or governmental programmes; they think more individuals should simply refuse to give out information they are asked for; and they favour the enactment of strong laws to secure privacy rights and control organisational discretion. The second group was labelled 'Privacy Pragmatists'. This segment currently represents about 55 per cent of the population. This group examines the relevance and social propriety of

the information sought; wants to know about the potential risks to breaches of their privacy and about the security of their information; is sensitive in observing whether fair information practices are being maintained widely enough; and then decides whether the segment will agree or disagree with specific information activities. The final group, the 'Privacy Unconcerned', represent about 20 per cent of the population. This group does not know what the 'privacy fuss' is all about. It supports the benefits of most organisational programmes over warnings about privacy abuse; has few problems with supplying personal information to government authorities or businesses; and sees no need for creating another government bureaucracy to protect someone's privacy.

The Privacy Segmentation Index was applied in this study with the objective **to classify South African consumers into different privacy sensitive segments based on their general privacy concerns (SO10)**. The following null and alternative hypotheses were formulated to address this secondary objective:

H₀: The proportion of South African consumers is equally represented in the different privacy segments.

H₆: The proportion of South African consumers is not equally represented in the different privacy segments.

5.4.7 Hypotheses 7a to 7f

Given that privacy appears to have numerous dimensions and that different mechanisms are used to control privacy in different cultures, it seems reasonable to hypothesise that different types of people may vary in terms of how they view the construct of privacy (Petrison & Wang, 1995:21). Another secondary objective was therefore **to identify differences between consumers in terms of their demographic characteristics and their privacy concerns (SO11)**. Six hypotheses were formulated to test for significant differences between the different demographic variables, as discussed below.

5.4.7.1 Hypothesis 7a

Numerous studies have found a strong relationship between age and privacy concerns. A study by Rainie (2002:20) indicated a strong link between age and Internet users' behaviour with regard to privacy. The findings of other studies have shown that younger adults (average ages 18-34) were less concerned about privacy than those aged above 50 years (Milne *et al.*, 1996:25; TNS Intersearch, 2001:44). This was supported by the findings of a study by Harris Interactive and Westin (2000:4), who reported that a significantly greater number of United States consumers aged below 30 held a positive view of personalised marketing than did consumers over 50 years. Similarly, younger consumers in the United Kingdom and Germany were more likely than consumers over 50 to report a positive view of personalised marketing. The findings of a study by Culnan (1995:14) illustrated that older consumers (aged above 50) were more aware of name removal procedures, leading to a reduced concern about privacy. Various studies have found that privacy concerns appear to increase with age (Nowak & Phelps, 1992:35; Campbell, 1997:51; Milne & Boza, 1999:15; Harris & Westin, 2000:8). American, British and German consumers over 50 were more likely to fall into the category of the 'very concerned' than consumers between 18 and 29 years of age (Harris Interactive & Westin, 2000:5). The findings of a recent study by Harris Interactive (2002b:33) were that older adults (aged above 50) were much more concerned about specific misuses of personal information than younger adults; they were more likely to feel that they have little control over how their personal information is used; but they were far more likely than younger adults to agree that most organisations handle their personal information properly and confidentially.

Louis Harris & Associates and Westin (1998b:43) also found that the older the respondents were, the more likely they were to characterise telemarketing calls as intrusive. Their results also showed that older consumers were more likely to opt out of receiving telemarketing calls, and were more likely to refuse to give information to an organisation because they argue that this kind of information is not really needed or is too personal (Louis Harris & Associates & Westin, 1998b:ix-xviii). Despite the fact that

Phelps *et al.* (2000:34) found no statistically significant relationship between age and privacy concerns, the majority of studies do show that privacy concerns increase with age.

Since no studies have been published on the relationship between age and privacy concerns in South Africa, the hypothesis tests the difference between age groups and their privacy concerns.

H₀: There is no significant difference between young and old people in terms of their privacy concerns.

H_{7a}: There is a significant difference between young and old people in terms of their privacy concerns.

5.4.7.2 *Hypothesis 7b*

Smith (2001:12) has found that a country's cultural values have a significant role in explaining the level of privacy concern in a country. In his study, higher levels of individualism, masculinity and power distance (USA) were associated with higher levels of privacy concern, but the relationship with uncertainty avoidance was the reverse (associated with the European approach). Second, he showed that there was a relationship between these cultural values and the regulatory approach embraced by a country. The findings of a study by Louis Harris & Associates and Westin (1998b:ix-xviii) illustrated that whites were more likely to consider telemarketing calls as intrusions than African-Americans or Hispanic Americans were. Also, whites were among those most likely to state that privacy policies for local telephone companies were absolutely essential. A comparative analysis between Japanese and United States consumers' attitudes toward privacy reported that privacy had different meanings depending on the culture (Maynard & Taylor, 1996:43). Since ethnic classification is a sensitive issue in South Africa, this study used home language as a variable instead of ethnic orientation.

The following null and alternative research hypotheses were formulated in the context of the findings from the studies cited above:

H₀: There is no significant difference between the main language groups in terms of their privacy concerns.

H_{7b}: There is a significant difference between the main language groups in terms of their privacy concerns.

5.4.7.3 Hypothesis 7c

The findings of a study by Nowak and Phelps (1992:35) indicated that concerns about threats to personal privacy did not vary across different levels of education. Most other empirical studies, however, reported a strong relationship between levels of education and privacy concerns. The findings of a study by Harris Interactive (2002b:43) showed that adults with lower educational levels were more concerned about the potential misuse of their personal information than adults with higher educational levels were. The study also noted that less educated adults were far less likely to be privacy assertive: instead, adults with higher educational levels were more active in protecting their privacy when interacting with organisations (Harris Interactive, 2002b:45). Milne *et al.* (1996:25) also reported that attitudes toward privacy differed significantly according to educational levels, but that the levels were not directly related to privacy concerns. Their findings showed that respondents with the lowest and the highest educational levels were the most concerned about privacy, with the middle group showing less concern. However, the majority of the studies done so far illustrate that more highly educated consumers had higher levels of privacy concern (Phelps *et al.*, 2000:34).

Several important privacy concerns were reported to be significantly different between more educated and less educated consumers. First, the results of a study by Culnan (1995:14) indicates that consumers who are aware of name removal procedures tend to be better educated than those who are not aware of name removal procedures. Second, Louis Harris & Associates and Westin (1998:xviii) reported that consumers with

higher levels of education were more likely than less educated consumers to request an organisation not to sell or give their name and address to another organisation. These consumers regarded privacy policies as absolutely essential. The findings of a study by Harris Interactive and Westin (2000:5,8) contended that more highly educated consumers were more likely than less educated consumers to report personal experiences of privacy invasion and were more inclined to limit the use of their personal information. A study among consumers in the USA, the United Kingdom and Germany indicated that as education levels increased, consumers in all three countries were more likely to refuse to give out personal information (Harris Interactive & Westin, 2000:7).

Given all the above-mentioned findings, and the fact that no relationships between educational levels and privacy concerns have been reported on in the South African situation, the following null and alternative hypotheses were formulated:

H₀: There is no significant difference between consumers in terms of their levels of education and their privacy concerns.

H_{7c}: There is a significant difference between consumers in terms of their levels of education and their privacy concerns.

5.4.7.4 *Hypotheses 7d and 7e*

Not many studies report on relationships between employment status and privacy concerns. One study by Phelps *et al.* (2000:34) indicated that there was no statistically significant relationship between employment status and privacy concerns. Several studies reported that income levels had no direct effect on consumer information privacy concerns (Milne *et al.*, 1996:25; Campbell, 1997:51; Phelps *et al.*, 2000:34). Another study reported that more affluent and established individuals may view the concept of privacy more seriously (Wang & Petrison, 1993:16). More specifically, the higher the household income the more likely it is that telemarketing calls will be characterised as intrusive. More affluent consumers were more likely to opt out of receiving telemarketing

calls, and were also more likely to refuse to give information to an organisation because they thought the information was not really needed or was too personal. Households with larger incomes were also more likely to have reported having asked an organisation not to sell or give their name and address to another organisation and more affluent consumers were among those who were most likely to argue that privacy policies are absolutely essential (Louis Harris & Associates & Westin, 1998b:x). More affluent consumers were also more likely than less affluent consumers to limit the use of their personal information (Harris Interactive & Westin, 2000:8). Some studies have, however, reported the opposite, where respondents with higher incomes were less concerned about privacy (Milne & Boza, 1999:18; TNS Intersearch, 2001:44). The findings of a study by Harris Interactive (2002b:43) showed that adults with a low income were more concerned about the potential misuse of their information than the affluent. Because of the conflicting results from studies in other countries, and the fact no relationships between employment status, income and privacy concerns are known in respect of South African consumers, the following null and alternative hypotheses were formulated:

H_0 : There is no significant difference between consumers in terms of their employment status and their privacy concerns.

H_{7d} : There is a significant difference between consumers in terms of their employment status and their privacy concerns.

H_0 : There is no significant difference between consumers in terms of their income levels and their privacy concerns.

H_{7e} : There is a significant difference between consumers in terms of their income levels and their privacy concerns.

5.4.7.5 Hypothesis 7f

Several studies maintain that gender is strongly associated with privacy concerns (Rainie, 2002:20), except for the findings of a study by Phelps *et al.* (2000:34) who

indicated no statistically significant relationship between gender and privacy concerns. Generally, females express more concern about threats to their personal privacy (Louis Harris & Associates & Westin, 1998b, xi; Sheehan, 1999:24-38). Females seem more concerned than males about unsolicited e-mail (Sheehan, 1999:24), about secondary usage of information (Sheehan, 1999:28); about the potential misuse of their personal information (Harris Interactive, 2002b:32); and about insecure transactions or situations where their personal information could be stolen (Harris Interactive, 2002b:32). Even in the online environment, females are more likely to express privacy concerns than males (TNS Intersearch, 2001:44). In general, when deciding if they want to do business with an organisation, females are more likely than males to take into consideration whether an organisation explains how it will use personal information and whether an audit report has been conducted that verifies the organisation's privacy practices (Harris Interactive, 2002b:93).

Since most studies report differences between gender groups and privacy concerns, the following null and alternative hypotheses were formulated:

H₀: There is no significant difference between males and females in terms of their privacy concerns.

H_{7f}: There is a significant difference between males and females in terms of their privacy concerns.

5.5 SUMMARY

This chapter has been intended to serve as a link between the three literature-specific chapters (Chapters 2, 3 and 4), and the empirical research chapters (Chapters 6 and 7). Chapter 5 provided a logical progression and cohesive framework between theory and research. The problem statement and objectives formulated in Chapter 1, together with the hypotheses formulated in this chapter, form the basis of the empirical study to follow. In terms of the progression of the study, the next chapter, Chapter 6 focuses on the research design and methodology.