



**THE INFLUENCE OF RELIGION ON RETAIL PATRONAGE
BEHAVIOUR IN MALAYSIA**

By

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ABSTRACT

Although culture and subcultural norms have been subjected to increased scrutiny in recent years as explanatory constructs for various dimensions of consumer behaviours, religion as a subsystem of culture has received only slight attention in the marketing literature. The purpose of this study was to examine the religious influences on some selected aspects of consumer behaviour. Utilising consumer behaviour model of retail patronage as a framework, religious influences on the following aspects of consumer behaviour were examined: lifestyle, use of information source, shopping orientation, store attribute importance and store patronage. Consistent with previous research, religion was viewed from two different perspectives namely religious affiliation and religiosity. Religious affiliation is the adherence of individuals to a particular religious group while religiosity, or religious commitment, is the degree in which beliefs in specific religious values and ideals are espoused and practiced by an individual.

Fieldwork for this study was carried out in Malaysia where the populace contains sizable percentages of adherents to four of the world's leading religions, namely Islam, Buddhism, Hinduism and Christianity. The research data was collected by means of a survey through personal interviews with a structured questionnaire. Out of three hundred respondents targeted, two hundred and twenty-six questionnaires were deemed usable for statistical analysis. Statistical tests were calculated using statistical procedures of SPSS version 11.5. The main statistical techniques used include exploratory factor analysis, analysis of variance (ANOVA), multivariate ANOVA and multiple linear regression analysis.

Findings indicated significant differences between religious affiliation groups in the areas of lifestyle, store attributes and store patronage. Significant differences between religiosity groups were also revealed in the areas of lifestyle, information source, shopping orientation and importance of store attributes. The usefulness of religious variables was further tested using multiple linear regression analysis with demographics and lifestyles were entered as extraneous variables. Results indicated that when the effect of other predictor variables were explicitly controlled (i.e. held constant) during the regression analysis, religious affiliation appeared to influence the

perceived importance of store attributes. Intrapersonal religiosity, when controlling for the effect of other predictor variables, appeared to influence the use of information source, shopping orientation and perceived importance of store attributes. Similarly, interpersonal religiosity, when controlling for the effect of other predictor variables, was found to influence the use of information source, shopping orientation and importance of store attributes.

Overall, findings indicated that consumer religiosity, as compared to religious affiliation, was more useful in predicting aspects of retail patronage activities. Thus it is suggested that religiosity variable should be given consideration in future patronage behaviour model building and research efforts. The implications of these results for theories of consumer behaviour along with the practical implications of the findings were discussed and opportunities for future research were provided.

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DECLARATION

This thesis is submitted in fulfilment of the requirements for the degree of Doctor of Philosophy (marketing) at the University of Stirling, United Kingdom. I declare that this thesis is based on my original work except for quotations and citations which have been duly acknowledged. I also declare that this thesis has not been previously or concurrently submitted, either in whole or in part, for any other qualification at the University of Stirling or other institutions.

Signed

Safiek Mokhlis

September 2006

*This thesis is dedicated to
Ayang, Alyssa & Amy*

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CHAPTER 1

INTRODUCTION

1.0 Preamble

In this introductory chapter, six main areas of interest will be presented. The first section sets the agenda of the study. The second section describes the purpose and objectives of the study. Hypotheses to be tested are outlined in the third section. The fourth section, the conduct of the study, provides an overview of the study undertaken. The fifth section discusses the significance of the study while the final section outlines the structure of this thesis.

1.1 Setting the Agenda

Research in social psychology has been valuable in providing key frameworks for understanding the complex relationship between culture and human behaviour. One of the lessons learned from the field is that cultural variations have significant impact on the way people view the world and that these views ultimately affect their behaviour (Shweder 1991; Manstead 1997). Paralleling this recognition, the past two decades or so have witnessed an increasing amount of consumer behaviour research across cultures (Sojka and Tansuhaj 1995). More significantly, many studies conducted in national and international settings have succeeded in establishing links between cultures and various aspects of consumer behaviours. According to de Mooij (2004), culture is the all-encompassing force which forms personality, which in turn is the key determinant of consumer behaviours. She contends that culture and consumer

behaviour are intimately knotted together and therefore “untying the rope” is an almost impossible task.

Since cultural background is one of the most important determinants of consumer behaviour, “a marketer with a defective knowledge of culture is doomed” (Engel, Blackwell and Miniard 1995, p. 145). Indeed, research by Bristow and Asquith (1999), Gurhan-Canli and Maheswaran (2000), Chudry and Pallister (2002) and de Mooij and Hofstede (2002), to name a few, all revealed that consumers from different cultural backgrounds express certain significant differences of their own, which may warrant differential marketing efforts. From the managerial perspective, a clear understanding of culture and the influence that cultural values have on consumers’ attitudes and behaviour is a prerequisite for designing effective strategies for marketing to consumers of diverse cultural backgrounds. Yet due to diversity in race, nationality, religious values, geography and customs, it has become increasingly difficult for marketers to use the same marketing mix strategies for all consumer groups (Cui 1997). Cultural diversity requires marketers to understand each group of consumers including their basic demographics, media usage, shopping behaviour, store patronage and consumption patterns and to use sophisticated marketing techniques to reach them. Failure to customise their offerings to cultural variations would also result in the failure of marketing programmes directed to a specific market segment.

Despite the importance of acknowledging the concept of culture and its marketing implications, it appears that empirical studies of consumer behaviour focusing on cultures are disproportionately under-represented. A survey of recently published articles indicated that the preponderance of consumer research on culture

has focused on either general values (Burgess and Steenkamp 1999; Gregory, Munch and Peterson 2002; Sun, Horn and Merritt 2004) or specific subcultural factors such as ethnicity (Kim and Kang 2001; Lindridge and Dibb 2003) and nationality (Cheron and Hayashi 2001; Moss and Vinten 2001) as the primary dimension or behavioural differentiation with far less attention given to some other similar areas of influence. One notable example of a cultural-based predictor that has received relatively little sophisticated attention in contemporary consumer behaviour research is religion.

While many marketing texts recognise that religion can have important effects on international marketing decisions (Griffin and Pustay 1996; Kotabe and Helsen 1998; Jain 1996; Cateora and Graham 1999; Terpstra and Sarathy 2000), religion as a consumer characteristic in its own right has been relatively under-researched, yet logically would appear to possess potential value. As Delener (1994) notes, “although religion has been a significant force in the lives of many individuals, its role in consumer choice can be characterised as unclear or fuzzy” (p. 36). Religion and religiosity (i.e. the degree to which belief in specific values and ideals are held, practiced and become a badge of identity) receive, at best, a perfunctory mention (under the “subcultures” topic) in most consumer behaviour texts and have been given limited research attention over the past twenty five years. If they have been studied, the focus is on examining religious variation in consumer behaviour without drawing out practical marketing implications. This is remarkable given the long recognition that religion plays a significant role in shaping human attitudes and behaviours and the realisation that the current trend is towards the global resurgence of organised religiosity (Armstrong 2001; Arnould, Price and Zikhan 2004).

An analysis conducted by Cutler (1991) that examined the frequency with which papers on religion were published in the academic marketing literature prior to 1990 found that only thirty five relevant articles had a religious focus and only six of them were specifically identified as articles within the consumer behaviour discipline. Certain problems have deterred consumer researchers from conducting an extensive study on this topic. Some problems cited include the sensitive nature of the subject (Hirschman 1983; Bailey and Sood 1993), the problem of measurement (Wilkes, Burnett and Howell 1986; Clark 1992), gender of participants (Khraim, Mohamad and Jantan 1999) and methodological difficulties in obtaining valid and reliable data (Bailey and Sood 1993; Sood and Nasu 1995). While these problems may partly explain why religion has been marginalised as a research issue in the consumer behaviour literature, they also forced some marketing scholars to uncover the potential of this construct in explaining consumption phenomena. Of the sporadic research that has been conducted (Hirschman 1983; McDaniel and Burnett 1990; Delener 1990a, 1990b, 1994; Sood and Nasu 1995; Fam, Waller and Erdogan 2004; Essoo and Dibb 2004), findings indicated that religion can be a significant factor in relation to how advertising messages are perceived; consumption patterns; innovativeness; media usage; family decision-making; purchase risk aversion and selected retail store patronage behaviour.

The current limited amount of empirical research further explains why many marketers seem oblivious about the potential of religion as a segmentation variable as well as for other marketing actions. Very often, marketers tend to rely on implications related to basic demographic data such as discretionary income, employment status and chronological age to segment their target market without realising that these

variables are in a state of constant flux (McDaniel and Burnett 1990). Even the use of an ethnic-based approach (Cui 1997), which has proven to be practical for segmenting consumers in a multicultural market, sometimes can be misleading especially when the target population is broadly grouped according to their skin colour or continent of origin; disregarding the fact that one ethnic group can actually embody several different ethnic as well as religious subgroups (Venkatesh 1995; Chudry and Pallister 2002). Such permutations make it even more difficult to pin down the concept of ethnicity than in the case of the other concepts such as race, nationality and religion (Venkatesh 1995; Pirez and Stanton 2004). It follows, therefore, that different subcultural groups should be better considered as distinct segments instead of broadly grouping them. It is suggested that religion can be used by marketers as a tool to achieve greater precision and effectiveness in market segmentation.

At least three reasons appear to exist for investigating the potential relationship between religion and consumer behaviour. First, religion is a central part of life value that is often developed at an early age and therefore it plays a significant role in establishing consumption prescriptions and proscriptions for many individuals (Sheikh and Thomas 1994; Berkman, Lindquist and Sirgy 1997). Second, religion represents the most basic element of the individual's cognitive world. It is an inherent human value that serves to define the ways to do things (i.e. established practices) and to provide a series of tools and techniques for social behaviour (Delener 1994). As such, it is expected that religious individuals are prone to translate their internal religious beliefs into external consumer behavioural activities. Thirdly, religion indeed has the potential as a socio-segmentation variable "owing to its stability over time and the observable nature of many of its elements" (Delener 1994, p. 38). While

behavioural implications related to basic demographics indicators such as age and level of income change over time, a more stable personal characteristic might improve predictive value (McDaniel and Burnett 1990).

It can logically be assumed that if diversity exists among the various religious segments, marketers should define their target markets and direct efforts toward those target markets. However, if religious influences are not found to vary in aspects of consumer behaviour, more efficient marketing strategies can be developed by focusing on common needs across consumer segments. Therefore, it is critical to understand whether religion affect consumer behaviours.

In view of the potential of religious variables as explanatory constructs of consumer behaviour as well as segmentation tools attractive to marketing community, there is, indeed, a pressing need to study its application in predicting consumer behaviour. The study reported in this thesis extends the current, small knowledge base by empirically investigating the role played by religion in influencing aspects of consumer behaviour. The aim was to contribute to our current stock of understanding of this relationship as well as to provide a basis for further investigation in this promising research area.

1.2 Purpose of the Study

Consumer behaviour can be defined as a study of human behaviour within the consumer role, including all phases in the decision-making process. According to Engel et al. (1995), consumer behaviour encompasses all the activities leading up to the acquisition, consumption and disposition of a product or service. They further suggest that apart from internal factors such as motives, personality traits, emotions

and attitudes, there exist external or environmental factors such as cultural norms and values that partially explain behavioural differences between different segments of consumers.

In order to understand external factors that influence consumer activities, the consumer behaviour model needs to be dissected and studied in a piecemeal basis way. This thesis builds on earlier contributions to examine the cultural influences on one aspect of consumer activities as defined by Engel et al. (1995): acquisition behaviour. More specifically, the purpose of this study was to examine the influence of religion as a component of culture on retail patronage behaviour as one specific facet of consumers' acquisition behaviour. The objectives were to assess the effects of religious affiliation and religiosity on the following aspects of retail patronage behaviour: lifestyle, information sources, shopping orientations, perceived importance of store attributes and store patronage. These aspects were purposely selected for empirical investigation due to their prevalence in the literature and their use to describe the basic component of retail patronage models (e.g. Shim and Kotsiopoulos 1992a; Kim and Kang-Park 1995; Eckman, Kotsiopoulos and Bickle 1997; Seo, Hathcote and Sweaney 2001; Welker 2004).

1.3 Hypotheses

Based on the objectives and theoretical model of the current study, the following exploratory hypotheses were developed:

H1a: There are significant differences in lifestyle among consumers affiliated with different religions.

- H1b: There are significant differences in use of information source among consumers affiliated with different religions.
- H1c: There are significant differences in shopping orientation among consumers affiliated with different religions.
- H1d: There are significant differences in perceived importance of store attributes among consumers affiliated with different religions.
- H1e: There are significant differences in store patronage among consumers affiliated with different religions.
- H2a: There are significant differences in lifestyle among consumers with different levels of religiosity.
- H2b: There are significant differences in use of information source among consumers with different levels of religiosity.
- H2c: There are significant differences in shopping orientation among consumers with different levels of religiosity.
- H2d: There are significant differences in perceived importance of store attributes among consumers with different levels of religiosity.
- H2e: There are significant differences in store patronage among consumers with different levels of religiosity.
- H3a: Holding all other predictors constant, there is a significant relationship between religious affiliation and use of information sources.
- H3b: Holding all other predictors constant, there is a significant relationship between religious affiliation and shopping orientation.
- H3c: Holding all other predictors constant, there is a significant relationship between religious affiliation and perceived importance of store attributes.

- H3d: Holding all other predictors constant, there is a significant relationship between religious affiliation and store patronage.
- H4a: Holding all other predictors constant, there is a significant relationship between consumer religiosity and use of information source.
- H4b: Holding all other predictors constant, there is a significant relationship between consumer religiosity and shopping orientation.
- H4c: Holding all other predictors constant, there is a significant relationship between consumer religiosity and perceived importance of store attributes.
- H4d: Holding all other predictors constant, there is a significant relationship between consumer religiosity and store patronage.

1.4 The Conduct of the Study

This three year study was formally proposed in April 2002. After extensive review of relevant literature, research hypotheses were developed for empirical testing. A structured questionnaire was then designed for use in the field survey. The questionnaire was produced in two versions, Malay and English by using back translation procedure. After allowing for minor revisions based on expert opinion and pilot testing, the questionnaire was personally distributed to three hundred respondents in Kuala Lumpur, Malaysia. The researcher chose Malaysia as an appropriate setting for this study on the ground that it is one of the few countries where the populace contains sizable percentages of adherents to four of the world's major religions namely Islam, Buddhism, Hinduism and Christianity. From the fieldwork, two hundred and twenty-six usable questionnaires were secured for analysis. The data was processed by using SPSS programme version 11.5 leading to appropriate descriptive

and inferential statistical analysis. The main analytical procedures used in this study include analysis of variance (ANOVA), factor analysis, multivariate analysis of variance (MANOVA) and multiple linear regression analysis. These analyses provide a complete exploration of univariate and multivariate relationships among the data. The resulting information formed the basis for conclusions.

1.5 Significance of the Study

From a consumer behaviour perspective, consumption has been largely understood as a cultural phenomenon because behavioural patterns and characteristics of a particular culture are often expressed through consumption of material objects such as dress, food and housing (McCracken 1990). The findings of Lee (2000), Ackennan and Tellis (2001), Kacen and Lee (2002) and Chung (1998), among others, have demonstrated that cultural values seem to play an important role in consumers' buying patterns. Thus, cultural analysis is a logical starting point for the examination of consumer behaviour.

Even though the marketing literature reflects an emerging interest in the topic, regrettably, there is limited empirical research to date which focuses on the potential effectiveness of using religion and religiosity as cultural-based predictors for the understanding of fundamental consumer behaviour. In addition, almost all the empirical studies on this topic have been conducted in the United States where Judeo-Christian culture is predominant. The impact of religion on consumer behaviour in non-Western countries such as Malaysia with non-Judeo Christian religions has received little attention from researchers. This study is therefore undertaken as a first step in understanding from a cultural perspective the influence of religion on

consumer behaviour in a non-Western setting. Thus, the results from this study should add to the existing body of knowledge in the consumer behaviour field by explaining the relationship between an individual's religious background and his/her behaviour as a consumer.

Besides filling this void in the literature, the results of the current study can carry significant managerial implications for marketing strategists. The present study will determine whether religion is justifiable for market segmentation. If larger market segments of the society can be identified on the basis of their religious profiles, the marketing strategists could develop programmes and policies that would maximally enhance the importance values of the consumers in each religious market. In addition, findings of this study should contribute to niche marketing strategies by providing a framework within which religious consumer groups in Malaysia may be better understood and targeted by local marketers. For international marketers considering Malaysia as their new country market, an understanding of consumers' religious background and its influences on their shopping behaviours would be essential to compare with that of consumers in countries in which the firm has had prior marketing experience.

1.6 Structure of This Thesis

It is useful to provide a brief outline on the organisation of the chapters. A nine-chapter thesis format was employed in this study (see Figure 1.1). The current chapter introduces the background of the study and the major theme to be investigated within the context under examination. The remainder of this thesis is organised as follows.

Chapter Two presents an intensive review of literature germane to religion and consumer behaviour. In reviewing the literature, the following topics will be addressed: culture and religion, definition of religion, the study of religion in the social sciences, the study of religion in marketing, religion and consumer behaviour and measurement of religion in consumer research.

The empirical review on retail patronage behaviour will be presented in Chapter Three. The review is divided into two parts. Part one reviews theories and models of shopping and patronage behaviour. It provides the theoretical base for this thesis. Part two focuses on reviewing the selected aspects of retail patronage behaviour, which include information sources, shopping orientations, perceived importance of store attributes and store patronage. Hypotheses are then developed to test the proposed conceptual model.

Chapter Four discusses the Malaysian setting in which the empirical research will be conducted. The discussions include a general perspective on Malaysia, its historical background, economic development and demographic structure. Selected aspects of consumer behaviour including income and buying power, lifestyle and leisure activities are also discussed. The chapter also highlights the Malaysian cultural environment with special reference to its ethnic and religious compositions. This is then followed by brief perspectives of four major religions in Malaysia, namely Islam, Buddhism, Hinduism and Christianity in regards to their theological concepts and practices.

Chapter Five outlines a detailed, step-by-step procedural examination of the methodology employed in obtaining the required information for this empirical study. The discussion will be divided into five major sections as follows: choice of research

approach, method of data collection, research instrument, sampling process, the conduct of fieldwork survey and ethical considerations.

Theories of the main quantitative techniques applied in this study will be presented in the Chapter Six. The first part discusses the choice of statistical software to analyse the survey data, followed by the factors influencing the choice of statistical techniques. Three types of statistical analysis were then discussed: univariate analysis of descriptive statistics, bivariate analysis in the form of one-way analysis of variance (ANOVA), and multivariate analysis in the form of exploratory factor analysis, multivariate analysis of variance (MANOVA) and multiple linear regression analysis.

Chapters Seven and Eight present the empirical results of this study. The sequence of the presentation of the chapters follows the sequence of the hypotheses developed in this study.

In the final chapter, the researcher concludes the writing of this thesis by summarising the earlier discussions and empirical findings, and eventually highlighting the salient implications of this study. The results will be put into the context of retailing, addressing the questions of what implications the research has for consumer behaviour theory and marketing practices. The limitations experienced by the researcher in conducting the study will be then discussed. Possible avenues for future research wrap up the thesis.

Lastly, the correspondence letters, the questionnaire used in the study, descriptive statistics and diagnostic tests for multiple linear regression analysis are compiled in the appendices.

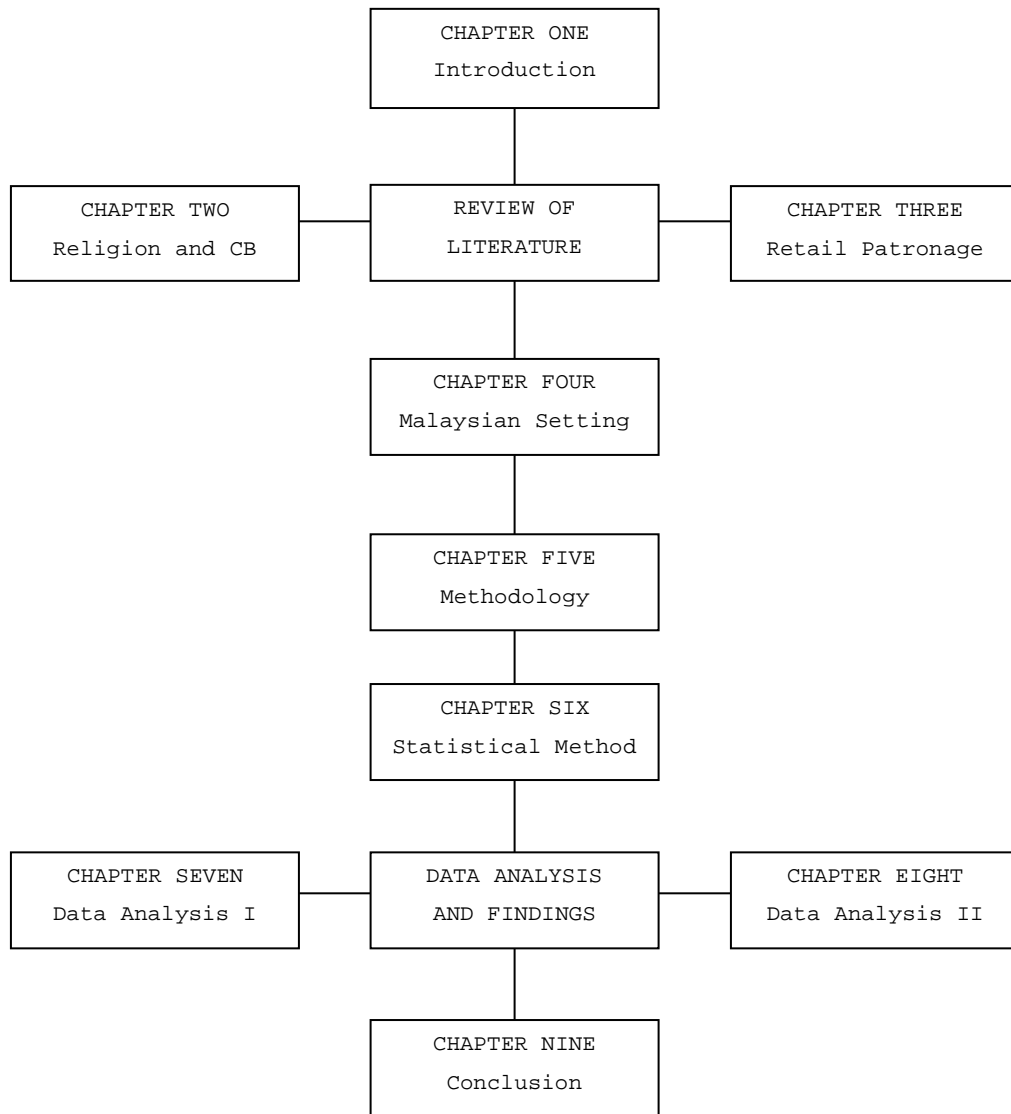


Figure 1.1 Presentation flow of the thesis

CHAPTER 2

RELIGION AND CONSUMER BEHAVIOUR

2.0 Introduction

The logical first step in every research project is to investigate existing research regarding the topic under study. This chapter reviews the current literature on religion and consumer behaviour. The first section discusses the role of religion as an important component of culture, followed by the concept of religion as defined in the literature. Next presented is a brief analysis of studies on religion in the social science and marketing literatures. Presented next is a review of studies on this subject from the consumer behaviour literature, organised into two subsections. The first subsection examines studies of consumption in particular religious settings. The second subsection reviews studies of religious influences on specific consumption behaviour, focusing on two main perspectives: religious affiliation and religiosity. These perspectives are key features of the present research into the influence of religion on consumer behaviour. This review is followed by an overview of the measurement of religion currently used in consumer research. This chapter ends with a conclusion of the preceding discussion.

2.1 Religion as a Cultural Subsystem

Culture refers to “the norms, beliefs and customs that are learned from society and lead to common patterns of behaviour” (Assael 1992, p. 319). It is a complex phenomenon rooted in the ideas and values shared by a group. Cultures are developed

within countries as a product of national patterns of early childhood and formative experiences as well as education, language, religion and geography. The patterns include concepts of the fundamental rights of the human beings, customs, along with feelings and attitudes, modes of life, traditions and beliefs, arts and letters and value systems (Shweder 1991). All these contribute to structure the culture of each society, each state and hence, each country. It is the difference in composition of the various patterns and their relationships with each other that set the differences in the culture (de Mooij 2004).

At the core of every culture, there exists a common set of values, ideals and assumptions about life that are widely shared by members of a society. The values are transmitted from one generation to the next through the process of learning and interacting with one's environment, rather than through the genetic process (Ferraro 1994). These learned values influence the members of the society to behave and act in a particular way considered socially acceptable by the other members in the group. These values also determine forms of social organisation, habits and conventions, the communication system and roles and status positions for members of that society (Slowikowski and Jarratt 1997).

One important element of a cultural phenomenon that has considerable influence on people's values, habits and attitudes is religion (Belzen 1999). Religion in its cultural context is credited with being the unified system of beliefs and practices that pervades the value structure of a society, which, in turn, forms a central part of the cognitive or ideological elements of a country's culture. While core cultural values providing social identity are secular in some societies, religion has frequently provided the value system around which groups in general, and nations, in particular, have coalesced, and

in which their members have identified themselves (Geertz 1993). In some societies such as in Israel, Iran, India and Saudi Arabia, religion is a major cohesive force, if not the only one. Because it is sacred, its value system is accepted unquestioningly by all members of the society and become part of all aspects of life, from family to education to the workplace to government (Berkman, Lindquist and Sirgy 1997). The inevitability of punishment provides a powerful deterrent to potential deviants and rituals maintain the salience of norms.

Religion is seen as a subsystem of culture and a value in itself, and is regarded as a way of life that encourages people to strive for other values (Schwartz and Huisman 1995). Values based on religious orientation not only are a powerful force in forming one's attitudes and behaviour but also serve as important guiding principles in one's daily life. Although theorists differ with regard to the specific values they link to religion, almost all agree that religions exercise influence over its adherents' value systems through socialisation processes by promulgating religious creeds, norms, moral prescriptions, ritual requirements and taboos (Crystal 1993; Wulff 1997; Berkman et al. 1997). Such sacred values shape the behaviour and practices of institutions and members of cultures.

As one of the foundations of moral teachings in the society (Bowen 1998), religion provides its adherents with a set of principles by which to live and those believers will be strongly influenced in their daily activities by the religion in which they have faith. It defines the ideal of life, supports power structures, gives meaning and shape to an individual's moral and society's ethical structures, rewards and punishes certain kinds of behaviour, providing norms for social action and justifies social institutions and social roles. It is through religion that members of cultures

create and apply specific systems of symbolic meaning corresponding with major cultural values regarding the supernatural. Such symbolism is necessary for and central to the enactment of a culture (Geertz 1993). That is, religion is an embodiment of the core values of a culture and as such it plays a central role in the daily lives of the members of any particular cultural group.

As a key subcategory of human values, religion provides personal as well as social identity within the context of a cosmic or metaphysical background (Marty and Appleby 1991). It relates specifically to a person's relationship with a supreme being and how an individual expresses that relationship in society. It influences how an individual conceives his/her purpose in life and what he/she regards as his/her responsibilities to himself/herself, to others and his/her God. Thus religion is said to compose of both internal and external dimensions. Internally, people can have religious identities, goals for religious development and religious attitudes, values and beliefs. People can evolve over time in terms of both their concepts and subjective experiences of religion. They can also perceive religion as an important means of coping with life's challenges. Externally, religion can be expressed by religious affiliation, devotional practices and membership in a religious community or attending religious functions.

Greeley (1963) describes three different models of the relationship between religion as a cultural subsystem and society. In the first model, religion influences the personality variables of its members and the members in their turn, acting under influence of their religious values, influence the organisation of the social system. A second model would view the influence flowing in the opposite direction: the social system would create in the personalities of its participants, dispositions which would

in their turn lead to certain kind of religious activity and belief. Thus, in the first model, religion is the independent variable; in the second model, religion becomes an “epiphenomenon” or a dependent variable. A third model would view religion as neither necessarily an independent variable nor necessarily a dependent variable; rather it would see religion as a “correlate”, as a “predictor” variable whose precise causal influence must be determined in each correlation and not as a matter of general principle. In this view, an individual’s religious belief could influence his/her personality, which in turn would influence the role he/she plays in the social system. On the other hand, the role he/she plays in the social system could shape the value system he/she espouses and in turn affect the religious belief he/she professes.

2.2 Definition of Religion

The search for a generally accepted theory or definition faces enormous difficulties in the case of religion (Clarke and Byrne 1993). Scholars identify at least three historical designations of the term: (1) a supernatural power to which individuals must respond; (2) a feeling present in the individual who conceives such a power; and (3) the ritual acts carried out in respect of that power (Wulff 1997). Such designations have defied social scientific consensus and thus “it is hard to make any generalisation [concerning religion] that is universally valid” (Peterson 2001, p. 6). As a result, different theories and definitions of religion are often used in the literature.

Clarke and Byrne (1993) identified three sources of doubt about the possibility of producing a satisfactory definition of religion. They relate to (1) conflicts and unclarities in the ordinary use of the term; (2) the confused meaning left to the term from its history; and (3) the obvious divergence in scholarly purposes and approaches

to the definition of religion. A perusal of the current literature on religion reveals a broad spectrum of conceptualisations of this construct. Among others, religion has been defined as:

“A belief in God accompanied by a commitment to follow principles believed to be set forth by God”.

McDaniel and Burnett (1990, p. 110)

“A socially shared set of beliefs, ideas and actions that relate to a reality that cannot be verified empirically yet is believed to affect the course of natural and human events”.

Terpstra and David (1991, p. 73)

“An organised system of beliefs, practices, rituals and symbols designed (a) to facilitate closeness to the sacred or transcendent (God, higher power or ultimate truth/reality), and (b) to foster an understanding of one’s relation and responsibility to others in living together in a community”.

Koenig, McCullough and Larson (2000, p. 18)

“A social arrangement designed to provide a shared, collective way of dealing with the unknown and un-knowable aspects of human life, with the mysteries of life, death and the different dilemmas that arise in the process of making moral decisions”.

Johnson (2000, p. 259)

“A cultural subsystem that refers to a unified system of beliefs and practices relative to a sacred ultimate reality or deity”.

Arnould, Price and Zikhan (2004, p. 517-518)

“A system of beliefs about the supernatural and spiritual world, about God, and about how humans, as God’s creatures, are supposed to behave on this earth”.

Sheth and Mittal (2004, p. 65)

A scrutiny of these various definitions reveals the inconsistency underlying the understanding and perception of the concept of religion among researchers. In their review of the conceptualisation of religiosity, Wilkes et al. (1986) suggest that the religious construct “must be defined for each research setting” (p. 48). Thus for the purpose of this study, a definition of religion proposed by McDaniel and Burnett (1990) was adopted: “a belief in God accompanied by a commitment to follow principles believed to be set forth by God” (p. 110). Although precise definition is a matter of substantial discussion and disagreement among scholars, this definition is sufficient for the purpose of this study. It considers the degree to which one employs his or her religious beliefs as a basis for how to act and live. Individuals with high levels of commitment to their religious beliefs or high involvement in a religious group are likely to draw upon their religion as an organising principle in individual decision-making. Such individuals may also be more likely to make sacrifices on behalf of the religious community, providing volunteer services or social supports to others.

2.3 The Study of Religion in the Social Sciences

The role and stature of religion in social scientific thinking has a tumultuous history. Religion played a central role in the development of early social science, and has been studied, through often contrasting, theoretical perspectives due to its centrality to socioeconomic structure. Marx (1912) perceived religion as a palliative used by the ruling class to subjugate and pacify the proletariat. In contrast, Weber (1930) saw religion as one of the fundamental elements of social behaviour that stimulated the rise of capitalism and industrial revolution in Europe and the United States.

Nevertheless, for most social theories of the 20th century, religion was perceived a taboo subject for scientific inquiry, as scholars believed that secularisation was an inevitable outgrowth of modernisation (Ebaugh 2002). This belief proved incorrect, as religion has maintained a firm foothold in the lives of many modern inhabitants of secular industrialised societies (Wuthnow 1998).

Thus after decades of being treated with “general indifference” (Zelinksi 2001), the study of religion appears to be in revival across a broad swathe of academic disciplines. For example, quality of life researchers consistently find that religiosity is positively related to psychological well-being (Levin and Chatters 1998; Swinyard, Kau and Phua 2001; Francis and Kaldor 2002; Eungi-Kim 2003; Suhail and Chaudhry 2004). Management scholars propose that religiosity shapes the ethical decision-making of corporate executives (Van Buren and Agle 1998; Weaver and Agle 2002). Tourism researchers have found the impact of religion on college students’ spring break and health-risk behaviour (Mattila et al. 2001). Political scientists have discovered that religious beliefs have a strong influence on the voting behaviour of general publics in Western Europe (Knutsen 2004) and the voting behaviour of members of the U.S. House of Representatives (Fastnow, Grant and Rudolph 1999). Religion has even become a focus among medical researchers who are currently investigating the potential healing effects of prayer (Ellison and Levin 1998; Sloan et al. 1999; Woods et al. 1999). In short, the growing and impressive body of research suggests that “religious variables are central in explanations of human behaviour” (Ebaugh 2002, p. 388).

2.4 The Study of Religion in Marketing

Despite its enormous social and cultural impact, as well as its resurgence in several other scholarly disciplines, the topic of religion has received scant attention from marketing scholars. This is likely a by-product of marketing's outgrowth as a social science at a time when religious considerations were eschewed by the academic community in general. In their review of the national proceedings literature base, Lovelock and Weinberg (1978) identified only two marketing articles on religion. Cutler (1991) extended their work by reviewing the academic marketing literature from 1978 to 1989 to determine what has been published concerning religion and marketing. Thirty five marketing articles related to religion were identified for the 30 year period from 1956 to 1989 with nearly 80% of these articles published in the 1980s. The researcher grouped these articles into six different categories as summarised in Tables 2.1 to 2.6.

Table 2.1 Attitudes toward the use of marketing

Author(s)	Subject/purpose of study
Dunlap, Gaynor & Rountree (1983)	Survey of clergies use of marketing techniques
Gazda, Anderson & Sciglimpaglia (1981)	Survey of attitudes of the clergy toward use of marketing activities in religion
McDaniel (1986)	Survey of attitudes on use of marketing
Moncrief, Lamb & Hart (1986)	Survey of clergy to assess the knowledge and use of marketing concept

Table 2.2 Application of marketing techniques

Author(s)	Subject/purpose of study
Healey & Delozier (1978)	Proposes a model of the religious system within a marketing context
Dunlap & Rountree (1981)	Development of a marketing model for religious organisations
Dunlap & Rountree (1982)	Applying marketing to religious organisations
Anderson, Rountree & Dunlap (1984)	Survey of student attitudes toward religion and test of marketing model of religion
Anderson & Rountree (1985)	Marketing model used to predict attendance
Carman (1987)	Economic model optimises and expenditures

Table 2.3 Religion's influence on marketing practices

Author(s)	Subject/purpose of study
Sethi (1980)	Discusses church/business conflict on social issues and distribution of wealth
Fugate (1982)	Discusses religious organisation involvement in the business world
Saches (1985)	Discusses 1984 Catholic Bishops Letter and implications for marketing education
Lantos (1984)	Biblical philosophy and the marketing concept
Lantos (1986)	Religion is a basis for ethical decisions
Klein (1987)	Discusses marketing implications of the 1984 Catholic Bishop's Economic Letter

Table 2.4 Religion and consumer behaviour

Author(s)	Subject/purpose of study
Engel (1976)	Empirical study contrasting psychographic profiles of denominations in Brazil
Hirschman (1983)	Religious affiliation influences consumer behaviour
Wilkes et al. (1986)	Discusses measurement of religiosity
LaBarbera (1987)	The Born Again Christianity movement and consumer behaviour
Delener & Schiffman (1988)	Empirical study of religion's effect on family decision making
Delener (1989)	Relationship between religious background and information search

Table 2.5 Case studies on religion and marketing

Author(s)	Subject/purpose of study
Engel (1974)	Billy Graham's crusade activities in Asia
Sweeney & Anderson (1981)	Market segmentation within a local church
Young (1987)	Utilisation of marketing concepts

Table 2.6 Miscellaneous marketing articles on religion

Author(s)	Subject/purpose of study
Culliton (1959)	Applying the 4's to religion
Burger (1970)	Application of marketing research to a religious organisation
Hempel & McEwen (1975)	Survey of church members, church leaders and newcomers to a community regarding attitudes toward religion

Kotler (1980)	Recommends marketing principles to churches
Cooper & McIlvain (1981)	Discusses suitability of religious organisations for marketing research
Miller & Niffenegger (1982)	Discussion of marketing techniques used by TV evangelists
Stutts & Gourley (1982)	Discussion of advertising practices of Christian churches
Young (1986)	Applying marketing research to religion
Walle (1988)	Christian Gospels as marketing communication
O'Guinn & Belk (1989)	Materialism and the consumption ethic within a TV evangelism

A similar analysis was undertaken by Cutler and Winans (1999) for articles on marketing published in the religion journals and periodicals read by religious academic and professional audiences. They found 17 articles on marketing issues that appeared in the religion literature for the 20 year period from 1976 to 1995. Subsequently, they reviewed these articles and classified them into four topic areas: (1) utilising or analysing marketing techniques (7 articles); (2) the usefulness of marketing techniques (3 articles); (3) the impact of marketing on religion (4 articles) and (4) relation of church and culture (3 articles). Table 2.7 to 2.10 summarise the purpose of these studies, organised under their topic areas.

Table 2.7 Utilising or analysing marketing techniques

Author(s)	Subject/purpose of study
McDaniel (1989)	Associates a church's growth or decline with the marketing techniques used by that church to determine which activities are associated with church growth
Wrenn & Kotler (1981)	Examines the marketing of Parochial Schools as an exchanges process, discussing what both parties gain from the exchange of educational services
Pilgrim (1991/1992)	Describes the marketing strategies utilised by televangelist Lester Sumrall in fundraising
Kane (1993)	Examines challenges to Christian Bible Colleges based on their place in the product life cycle, which the author considers to be late maturity
Fewster (1980)	Considers how a seminary utilises marketing and recruitment techniques without appearing unholy
Ross (1984)	How public relations can affect the administration and effectiveness of pastoral counselling programmes
Lageman (1984)	Studied pastoral counselling centres, found four approaches to marketing pastoral counselling; most centres use all four

Table 2.8 The usefulness of marketing techniques

Author(s)	Subject/purpose of study
Ogletree (1995/96)	Marketing has much to offer and can spread the good news. Market thinking can also foster self-indulgence and short-term advantages at the expense of long-term well being
Wrenn (1993a)	There are major criticisms of marketing, but marketing practices can benefit the church when fully understood and properly used. Religion can't be marketed, but religious institutions can
Traber (1987)	Mass media for marketing the church will not be as effective as many leaders think

Table 2.9 Impact of marketing on religion

Author(s)	Subject/purpose of study
Kenneson (1993)	Question if the act of marketing the church makes it less religious, less committed to God
Wrenn (1993a)	Church needs to be theology-centred, marketing could cause the church to centre on nonreligious people, thus losing its effectiveness. Adapting the faith to consumer wants poses a great danger
Long (1995)	A world market could mean a very small place for God. Theology must be the centre of religion, not the market, even a world market
Iannaccone (1992)	Examines consumers' rational choice behaviour in religious commitment, finding commitment increases with open markets in religion

Table 2.10 Relation of church and culture

Author(s)	Subject/purpose of study
Mauss (1996)	Examines the church in a cost benefit analysis. The cost of joining a new religion may be too high or too low. If too low, potential members may assume the product is of little value
Samuel & Sugden (1983)	Examines the relationship between the host country church and the international mission agency. Funds international agencies are similar to multi-national corporations. The internationals have greater resources and dominate the relationship
Luidens et al. (1994)	Studied 500 Baby Boomers confirmed in Presbyterian Churches, finding they have great tolerance for differing opinions and beliefs

A careful examination of these articles suggested that research on religious marketing can broadly classified into two major approaches according to its focus and perspective. The first approach, adopted in a great majority of these studies in this

area, considers religion as a commodity that can be marketed. Religious institutions such as churches are viewed as independent entities that are operating within an open market, competing among themselves and with other cultural institutions to attract potential customers for membership and support. The decision process of joining a religious group or of choosing a church is viewed as a consumer choice. It is within this context that interactions between producers of social products (i.e. religious organisations) and consumers of formal religions (i.e. general publics) are viewed as a marketing problem.

The second approach, which is the main focus of the present study, analyses the effects of religion on consumer behaviour (see Table 2.4). Within this approach, religion is conceptualised as a consumer subculture. By definition, a subculture is a group of people who, while sharing some traits in common with the surrounding culture (e.g. language), may be differentiated from it by their beliefs, symbols and/or material artefact (Schiffman and Kanuk 2000). Members of a subculture are identifiable as members of the general culture, but additionally possess certain characteristics by which they may be classified into a distinct category. One major proposition is that religious groups, as subcultures, constitute differentiable consumer segments. That is, religious groups may represent substantially distinct patterns of consumption characteristics.

As noted in the previous chapter, the purpose of this study was to examine the influence of religion as a subcultural variable on aspects of consumer behaviour. In order to establish a solid foundation for focussing on the particular aspects relevant to this study, the following section provides a review of related literature on the relationship between religion and consumer behaviour.

2.5 Religion and Consumer Behaviour

For the last three decades there has been considerable research establishing a link between cultural and subcultural values and aspects of consumer behaviour. However, religion as an inherent human value has received little attention from consumer researchers. This is partly a result of an initial assumption by a smaller number of consumer writers who maintain that the religious influences on consumption process are indirect and that the topic of religion had no place in theories of consumer behaviour. Hawkins, Coney and Best (1980) made one of the strongest statements on this position. They felt that differences in consumption processes related to religious affiliation were more closely related to social class or ethnic variations than to religion. Hawkins et al. (1980) summarised their thought on the role of religion in consumer choice as follows:

“...religious differences in the United States related to the consumption process are more apparent than real..., are indirect, and are often more closely associated with social class or ethnic variations than with the religion itself.”

The above contention however seems overly restrictive when considering the ubiquitous nature of religion in influencing many aspects of social life, including consumption behaviour. In general, the religions practiced in a society influence the emphasis placed on the material life and the attitudes toward owning and using goods and services. Religious traditions may prohibit the use of certain goods and services; for example, Islamic teachings forbid its followers from drinking liquor and eating pork while the veneration of the cow among the Hindus excludes them from consuming beef. Religion also affects the sanctity of different acts and rituals, for example, by officially prohibiting the use of certain method of contraception. Less

obvious is the influence of religion on the consumption of goods and services that are not directly restricted by religious laws. In such a case, religious values shape an individual's emotional experience, cognition and psychological well-being, which in turn, affect the consumption choices that consumers make.

Hirschman (1983) ventured three possible reasons to explain why religion per se has not been adequately examined in the consumer behaviour literature. The first reason for the slow development of literature in this area is the possibility that consumer researchers are unaware of the possible links between religion and consumption patterns. The second reason is a perceived prejudice against "religion" within the research community; once being a "taboo" subject and too sensitive to be submitted for investigation (i.e. the potential for inadvertent offence and the legal protection afforded freedom of religion). Finally, she claims that religion is everywhere in our life and therefore may have been overlooked by consumer researchers as an obvious variable for investigation in the field.

Although Hirschman made this assertion some years ago, it is still true today. To date, few studies have investigated religion as a predictor of consumption patterns even though there have been calls for such research in the literature. While psychologists have a history significant enough to have spawned a specialty area, the psychology of religion, marketing scholars have been slow to incorporate religion into their research. After conducting an extensive literature search, the researcher was only able to identify a handful of studies on this topic of religion in the consumer behaviour literature. Based on their common theme, these studies can be categorised into two broad groups, namely studies of culture and consumption in particular religious settings, and studies of the influence of religious affiliation and religiosity on specific

consumption-related behaviours. These studies are reviewed in the next sections with a particular attention given to the second group of studies as this perspective provides a particularly relevant theoretical background for the present study.

2.5.1 Consumption in Particular Religious Settings

The role of religion in shaping and influencing consumption patterns of consumers has long been a focus of many anthropological and sociological inquiries. Anthropologists maintain that religion is among the most significant cultural forces shaping and sustaining cultures and that the values of a particular society can be abstracted from religious practices, documents and artifacts. This is to say that the consumption of culture is the only way through which religion is enacted. Prominent modes of religious expression include clothing, food, grooming, jewelry, music, homes and home décor (McDannell 1995). Thus, religious values are employed to help define the cultural identity of a particular society.

Scholars interpret the meaning of religious goods as they exist in several different networks of significance. Previous sociological studies which have been conducted in different cultures show that participants construct meaning for religious objects by using a set of theological concepts (Tambiah 1984; Hopkins 1989; McDannell 1995). Religious objects derive meaning from social structures such as the nation, the community or denominational affiliation (Tambiah 1984; McDannell 1995) or from the network of social relationships (Cheal 1988; Belk and Coon 1991). Religious goods function as material reminders of significant events, moods, people and activities by condensing and compressing memory (Bilu 1988; Mehta and Belk 1991; McDannell 1995).

Taking the anthropological and sociological views as a point of departure, consumer researchers attempt to analyse the consumption of religious goods from a socio-cultural perspective. The principal stream of research using this approach is directed to the investigation of the marketer-consumer relationship and the transfer of meaning to religious goods or services in developing understanding of sacred aspects of consumption behaviour. A good example of study in this research theme is O'Guinn and Belk's (1989) ethnographic study of consumption at Heritage Village, USA. In this study, O'Guinn and Belk show how in this Christian religious park, established by the popular 1980s televangelists Jim and Tammy Faye Bakker, profane everyday objects were imbued with sacred qualities. Consumers perceived secular objects such as makeup and perfume as sacred by when they were framed within the context of a sacred place, a sacred time and a sacred journey to a religious-based theme park. This study clearly demonstrated that the profane commodities can be "contaminated" with sacred meaning such as religion.

This theme is further reinforced in Belk, Wallendorf, and Sherry's (1989) essay about their consumer behaviour odyssey across the United States in which they persuasively document how profane objects often become sacred and vice-versa. Another notable study in this research domain is Belk's (1992) historical essay on the tension between religiosity and worldliness among nineteenth century Mormon pioneers. Collectively, this body of research suggests that material objects can threaten the values and beliefs of the religious, who may try to minimise this hazard by rejecting worldly possessions or by giving these objects sacred qualities.

Hirschman and LaBarbera (1990) observed that religious objects like the Bible and other religious literature to be among the most important possessions of

evangelicals, described by them as a central source of life meaning. The depth of meaning found in these sacred materials, whether explicitly religious or sanctified by their association with those with whom one has cultivated emotional bonds, serves to elevate the significance of consumption. In a study of favourite possessions of Indians in India and Indian immigrants to the United States, Mehta and Belk (1991) observed that religious objects are not only essential for prayer rituals, but they also provide an important symbolic source of security and Indian cultural identity. This is particularly significant for the Indians who emigrated to the U.S. as an expression of deeper ethnic identity as well as their personal attachment to India. Similarly, a study by Joy and Dholakia (1991) showed that Indian professionals in Canada utilise religious artefacts and home space to create an atmosphere that reflects their past life in India and as a vehicle by which their children are socialised into Indian culture.

D'Alisera (2001) explored the utilisation of a variety of Islamic commodities among Muslim Sierra Leonean who are living and working in the Washington D.C. metropolitan area. He observed that popular religious objects such as bumper stickers, decals, informational pamphlets and kosher hot dogs are physical manifestations of experience, and function as a means of situating individuals and community in a transnational space. Individuals use these religious objects to make and maintain their religious identity and point to the act of display as a physical manifestation of their religious experience. These religious objects also serve as sacred symbols of their community affiliation, giving meaning to a set of intersecting discourses about what it means to be Sierra Leonean Muslim immigrants in the U.S.

Wattanasuwan and Elliott (1999) explored how a group of religious Buddhist teenagers in Thailand negotiate their Buddhist beliefs and endeavour to create a sense

of identity in their everyday consumption. An interpretive approach via ethnographic fieldwork was employed by these researchers to achieve an in-depth understanding of the relationship between the Buddhist-self concept and consumption practices. They found that although Buddhism advocates the concept of 'no-self', Buddhism teenagers still aspire to create the self. Instead of trying to detach them from self-ness, these teenagers paradoxically fall into attachment to particular symbolic consumption in an attempt to become what they believe a good Buddhist should be.

A study by Zaidman and Lowengart (2001) investigated the interaction of consumers and retailers in the marketing of religious goods and services at the time of Jewish pilgrimage to saints' tombs in Israel. The researchers attempted to analyse the exchange process in private religion where sacred goods (e.g. Jewish textbooks, candles, amulets, crystals) and services (e.g. blessings, healing) are transferred directly from an individual marketer to an individual consumer. Using an ethnographic approach, they found that the meaning attributed to religious goods, or the process by which goods acquire sacred meaning, involves not only the goods or the context but also the marketers themselves. The marketers' mediation process is intended to embed authenticity into the products or services they market and this authenticity is monotonically related to the retailer's proximity to the consumer's cultural world.

In a more recent study, Zaidman (2003) analysed the differences between modern and traditional religions regarding trade in religious goods. The study represents an analysis of the world of goods and participants' cultural worlds, as well as the transformation of meaning in religious objects. His study focused on members of two different subcultures in Israel: New Agers and Jews of North African origin

who are involved in pilgrimage to local saints' tombs. The results show that traditional and New Age subcultures differ with regard to participants' perspectives on the commercialisation of religious goods, the role of marketing agents as well as the general characteristics of the market.

Concluding, a common thread that emerged from these studies is the idea that religion contributes to a culture-specific sense of self that organises and gives meaning to life through consumption of religious objects. By integrating religious possessions with one's mode of life, an individual not only is able to establish the spiritual meaning of life but also endows their possessions with a special meaning within the overall consumption context. Such consumption has stimulated the commercialisation of religious goods and services as well as the emergence of markets for religious commodities.

2.5.2 Religious Influences on Consumption Behaviours

Researchers are also concerned with forging the link between religious variables and the attitude and behaviour of consumers. Within this approach, religion is considered a socio-economic segmentation variable like gender and race. In general, these studies have viewed religion from one of two perspectives: (1) religious affiliation or (2) religiosity. Religious affiliation was typically been measured relative to denominational membership or religious identification of the individuals. Religiosity, or religious commitment, has been measured both cognitively (e.g. the degree to which an individual holds religious beliefs) and behaviourally (e.g. frequency of church attendance). The following discussion of the literature in this area is presented relative to these two perspectives.

2.5.2.1 Religious Affiliation and Consumer Behaviour

Within the consumer behaviour paradigm, religious affiliation or the adherence of individuals to religious groups has been termed an ascribed status. This is because, like race and nationality, its effect on the individual's life often predates life, determines family size, the level of education attained, the amount of wealth accumulated and the type of life decision taken (Hirschman 1983). It is suggested that one is born into a religious tradition and through the action of its institutional influences (i.e. Sunday school, church attendance) develops a religious identity or affiliation. Religious affiliations therefore can be depicted as "cognitive systems" of the society. That is, believers of the same religious affiliation are viewed as sharing a common cognitive system of beliefs, values, expectations and behaviours (Hirschman 1983). In fact, even within the same ethnic group, religious subculture stands as a sacred value that differentiates people's attitudes and behaviours. Irish ethnicity, for instance, may be exhibited quite differently, depending upon whether one is Irish Catholic or Irish Protestant. Without religious differences, their ethnic differences almost certainly would be less distinct.

According to Sheth and Mittal (2004), religious affiliation affects consumer behaviour principally by influencing the consumer's personality structure – his or her beliefs, values and behavioural tendencies. These personality structures, in turn, affect consumers' marketplace behaviours. A review of current consumer behaviour and international marketing texts suggests two generalisations concerning the role of religion in consumer choice. First, religion functions as a macro-level transmitter of values. From this perspective, religion assists in the socialisation process by mediating the effects of other institutions and by encouraging consumers to embrace certain

values and precepts. Thus religion is seen as an important part of the socialisation process whereby parents condition their children to fit into the cultural pattern of their society (Moschis 1987; Terpstra and David 1991). Second, religious affiliations (e.g. Islam, Judaism and Hinduism) may influence various aspects of the choice behaviour of its members by the rules and taboos it inspires. Obvious examples are the importance of fasting and feasting to patterns of food purchases, belief in taboos on clothing styles and activities of women, practices of personal hygiene related to purchases of toiletries and cosmetics and influences on housing and entertainment patterns (Jain 1996; Jeannet and Hennessey 1998; Schutte and Ciarlante 1998; Schiffman and Kanuk 2000; Terpstra and Sarathy 2000; Solomon 2002; Arnould et al. 2004). For these reasons, scholars argue that religions of the world have deeply influenced consumer behaviour because of their significant effects on attitudes toward consumption and choices.

The little empirical evidence that has been accumulated indicates that religious affiliation has the potential to be valuable predictor of consumer behaviour. One of the earliest marketing studies that investigated the influence of religious affiliation on consumer behaviour was by Engel (1976) who noted sharp differences in the psychographic profiles between Lutheran Church and Assembly of God denominations in Brazil. He found that the Lutheran Church members are more secular and show relatively minimal interest in spiritual growth while Christianity has a considerable influence on the lifestyle of the Assembly of God members. Though the implications of Engel's findings are specific to the Brazilian consumer market, the study has empirically demonstrated that religious affiliation and denomination can serve as important variables for consumer segmentation.

In a study on religious affiliation and store location, Thompson and Raine (1976) investigated whether or not customers who shopped at one furniture store differed from the general population of the city with regard to religious affiliation, as well as whether religious affiliation was a significant determinant of furniture purchases at the store. They found that their results were not impressive and “generally disappointing” (p. 76), as religious affiliation showed no significant relationship to furniture sales. Nevertheless, their findings provided some support ($p = 0.10$) for their hypothesis that the store had a greater amount of sales coming from “a middle range of fundamentalist Protestant religious denominations” (p. 72).

A series of work on religious affiliation and consumer behaviour was carried out by Hirschman in the early 1980s. Her studies mainly focused on the similarities and differences in consumption-related activities among consumers affiliated with Catholicism, Protestantism and Judaism religions. In her earliest work, Hirschman (1981) examined the differences between Jewish and non-Jewish in information seeking and processing. Hirschman suggested that a person of Jewish ethnicity would exert a stronger effect on a fellow Jew’s behaviour compared to non-Jews. This is because a Jew is thought to be born into a culture and religion, and is therefore expected to adhere to the ethnic dimensions. Hirschman carefully controlled the analysis by computing regression coefficients for both Jews and non-Jews against a number of consumption-related characteristics. It was found that the Jewish subculture, as measured by their composite index of self-perceived religious and cultural affiliation strength, differed significantly from non-Jewish subculture. Specifically, for three of the characteristics – information seeking from mass media, innovativeness and transfer of information to others about products – the greater the

Jewish ethnicity, the more likely they were to exhibit these three buying characteristics. These relations suggest that both students and adult Jewish background are more likely than non-Jews to engage in these three activities.

In her subsequent study, Hirschman (1982a) demonstrated the presence of distinct differences between Catholic, Jewish and Protestant consumers in their self-perceptions regarding inherent novelty seeking and information transfer. The study showed that Jews indicate a higher level of inherent novelty seeking compared to Protestants and Catholics, and a higher level of information transfer among Jews and Catholics compared to Protestant consumers. She concluded that ethnic grouping based on religious affiliation may serve as a potentially useful predictor and determinant of consumption patterns.

Hirschman (1982b) later explored the effect of religious affiliation on motives for engaging in leisure activities. In this study, religious affiliation is posited to contribute to the consumer's possession of imaginal tendencies and sensory arousal-seeking. These characteristics are believed to enhance the development of certain consumption motives (such as fun and pleasure) which in turn lead to preferences for leisure activities. She reached the following tentative conclusions. First, religious affiliation appeared to be linked directly and/or indirectly to leisure consumption patterns. This linkage was present for both in the types of leisure activities preferred and the reasons for engaging in them. Second, one cause of the observed variation in leisure behaviour attributable to ethnicity may be religious differences in certain characteristics such as sensation seeking. Hirschman concluded that "consumer ethnicity, because it affects product choice and motivational values, may serve as a potent segmentation device for a wide range of consumption behaviours" (p. 97).

In a similar study, Hirschman (1982c) analysed the religious variation in hedonic consumption patterns among Catholic, Jewish and Protestant consumers. She found that Jews, as compared to Protestants and Catholics, had the greatest level of enthusiasm for engaging in their preferred physical activities, originated stimulation within themselves and exhibited a tendency toward higher levels of imagery behaviour than their counterparts. Both Protestant and Jewish subjects in Hirschman's study cited the fun and pleasure motives more than did their Catholic counterparts, reflecting religious differences in the purposive use of leisure time, as well as the types of activities they engaged in.

Hirschman (1983) also examined criteria and solution to weekend entertainment, transportation, housing and family pet decisions among Jews, Catholics and Protestants. Among her various findings was the tendency for Catholics to be less likely to consider price an important criterion for entertainment selection compared to Protestants, but more likely than either Protestants or Jews to consider price an important criterion for transportation or family pet selection. Also, Catholics were found to be more likely than Jews to consider "residence conditions" an important criterion for residence selection, more likely than Jews or Protestants to attend sporting events, and less likely than Jews to drink at bars or go to a night club. The conclusions were that Jews, Catholics and Protestants use different evaluation criteria in making consumption choices. Hirschman further asserted that much interpersonal variation in consumption patterns may originate with the religious affiliations of consumers.

Hirschman's (1985) analysis of the linkage between religious subcultures and media content preferences among college students found distinct differences between

Protestants, Jewish and Catholics in several types of content preferences including television programmes, books and motion picture. Although the sample characteristics do not allow for drawing generalisations on the basis of the findings, the study did support the general hypothesis that religious ethnicity are related to media content preference. In this study, religious differences emerged in a majority of content categories even when the major demographic factors of age, education and occupational status were explicitly controlled.

Paralleling Hirschman's pioneering analyses of consumption behaviour among religious subcultures, there have been a number of scholarly studies by other researchers to probe the significance of religious affiliation in explaining the variation in consumer behaviour. In his research, Delener (1987) adopted the Rokeach's dimension of values to explore the differences in value structure of the Catholic and Jewish consumers. His study showed significant differences between these two religious groups in regards their terminal and instrumental values. When magnitude of the value difference and statistical significance are taken into account, one terminal value, salvation, and one instrumental value, forgiving, emerge as the values that are most distinctively Christian.

Religious affiliation also appears to affect people's media usage and preferences. McDaniel and Burnett's (1991) study of the major media habits of evangelical (born-again) and non-evangelical consumers demonstrated some differences between these two market segments. They found that, as compared to their non-evangelical counterparts, evangelical consumers were generally lower in their newspaper readership, less likely to read business and skin magazines, less likely to listen to heavy rock or popular music and less likely to watch adult comedies or

adventure dramas. However, they tend to read religious magazines and use religious broadcast media more often than did non-evangelicals.

Bailey and Sood (1993) examined the effects of religious affiliation on consumer behaviour of six religious groups in Washington DC: Buddhism, Hinduism, Islam, Judaism, Catholic and Protestant. The underlying aim was to study how the minority religious groups' behaviour (i.e. Buddhism, Hinduism and Islam) differed from those in the majority (i.e. Judaism, Catholic and Protestant). The research examined shopping behaviour for a relatively expensive stereo sound system. The results identified statistically significant differences in the consumer behaviour of different religious groups. They found that Muslim consumers were relatively more impetuous shoppers but less likely to be informed or risky shoppers. Hindus were found to be in rational shopper group while Catholics were less likely to be informed shoppers. Buddhists are the only minority religious members in the sample to report consumer behaviour similar to the societal norms. In addition, the demographics of the consumers were found to moderate the effect of religious affiliation on shopping behaviour in that:

- Older Buddhists are more reluctant than younger
- More educated Buddhists are less risky shoppers
- More educated Muslims are less risky shoppers
- Muslim men are less informed than women
- More educated Jewish are less risky shoppers and
- Protestant men are more reluctant shoppers

Bailey and Sood were also especially keen to test whether minority religious groups (i.e. Buddhism, Hinduism and Islam) maintained their religious beliefs and

practices or modified their behaviour to reflect the culture in which they were now living. They found that not all people affiliated with a particular religion accept all of the beliefs and practices of the religion. A particularly revealing finding is that quite a few of the Buddhist followers do not hold with all of the beliefs of that religion, suggesting that they have changed their respective religious beliefs and practices. Both Hindu and Muslim consumers however have generally maintained their religious beliefs and practices, thus they have consumer behaviour different from the majority religious groups.

Essoo and Dibb (2004) conducted a similar study in the island of Mauritius with a national sample of 600 respondents from three different religions: Hinduism, Islam and Catholicism. The product chosen for this study was a television set, something that was not considered to be particularly religiously sensitive. In spite of this neutral product, the results confirmed that there were still marked differences between Hindus and Muslims for all seven types of shopper: the demanding, practical, trendy, traditional, economic, thoughtful and innovative shopper. Muslims and Catholics were also found to be significantly different for these shopper types except for the demanding shopper. The researchers also noted significant differences between Hindus and Catholics for the demanding, practical and traditional shopper types.

Evidence suggests that the influence of religious affiliation on consumer behaviour is not restricted to consumer decision-making of purchasing durable goods but also on their choice and evaluation of service providers. In an examination of hospitals, it was found that religious affiliation of a hospital is important in influencing hospital selection and contributes to overall patient satisfaction (Nix and Gibson 1989). This finding is later supported by Andaleeb (1993) who found that

hospitals of a particular religious affiliation were more likely to be recalled, preferred and selected by people of the same religious affiliation. He also found that religious affiliation influences hospital's quality-of-care evaluation such as the competency of doctors, helpfulness of administration staff, friendliness of nursing staff as well as overall quality of services.

Whilst religious affiliation has been found to influence hospital selection, this is not the case for bank patronage. A study by Haron, Ahmad and Planisek (1994) on bank patronage factors of Muslim and non-Muslim customers in Malaysia showed that there are many similarities between these two groups in their perception of commercial banks and utilisation of products or services. In terms of their perception of why people patronised the Islamic bank, the study revealed that about 39 per cent of the Muslim respondents believe that religion is the only reason that motivate people to patronise the Islamic bank.

Siala, O'Keefe and Hone (2004) studied the role of subcultural variables as antecedents to trust with the main emphasis being on religious affiliation in the context of electronic commerce. Using student participants recruited from Christian, Muslim and other faiths, their pseudo-experiment indicated that trust in e-commerce web sites differs according to the religious affiliation displayed on the web-site and that this difference is related to religious affiliation of the users. They found that the Muslim group expressed more trust in the Muslim site compared to the Christian site. They also expressed more positive attitudes towards the Muslim online bookstore than other sites. This finding further suggests that this group would be more likely to buy from the Muslim site than other two sites.

Fam, Waller and Erdogan (2004) conducted a large-scale study that analyse the influence of religion and intensity of religious belief on attitudes towards the advertising of four controversial product groups. These include gender/sex related products (e.g. female and male underwear), social/political products (e.g. guns and funeral services), health and care products (e.g. weight-loss programmes) and addictive products (e.g. cigarettes and alcohol). Student samples from four main religious groups namely Buddhism, Islam, Christianity and non-religious believers (mainly Taoism and Confucianism) across six different countries were included in their study. The researchers found that the followers of these four religious denominations have different attitudes towards the four controversial product groups. The study showed that the followers of Islamic faith were more likely to find advertising of all four product groups most offensive relative to the other three groups. The study also indicated that the religiously devout followers were more likely to find advertising of gender/sex related products, health and care products and addictive products more offensive than the less devout followers.

The preceding review makes it clear that different religions have different impacts on consumer behaviour. These differences are thought to result from divergent values and beliefs concerning consumption held by different religious ideologies. This effect may be either direct, as when consumption of specific products varies as a function of the tenets held by the religious traditions, or indirectly, as a function of differences in psychological constructs such as personality and values. The next section reviews the influence of religiosity or devoutness upon certain aspects of consumer behaviour.

2.5.2.2 Religiosity and Consumer Behaviour

It has been argued that religion is highly personal in nature and therefore its effects on consumer behaviour depend on individuals' level of religious commitment or the importance placed on religion in their life. Religious commitment, often termed as religiosity, is defined by Worthington et al. (2003, p. 85) as:

“the degree to which a person uses adheres to his or her religious values, beliefs and practices and uses them in daily living. The supposition is that a highly religious person will evaluate the world through religious schemas and thus will integrate his or her religion into much of his or her life.”

The above definition is in accordance with Johnson et al. (2001) who refers religiosity as “the extent to which an individual's committed to the religion he or she professes and its teachings, such as the individual's attitudes and behaviours reflect this commitment” (p. 25). If the followers strongly accept the doctrine of their religion, they tend to abide by the rules and codes of conduct set by their religious doctrines, for example, attending regularly weekly worship services and being strictly committed to the religious practices and membership of the group. If, on the other hand, their belief in religious tenet is weak, they might feel free to behave in other ways. Hence, how strongly consumers committed with their religion should be considered in understanding the nature of consumer behaviour.

Highly religious individuals typically exhibit a strong sense of commitment to their belief system and thus they are expected to behave according to the norms as described by their religion. As noted by Stark and Glock (1968), “the heart of religion is commitment” (p. 1). Because of their strong commitment to their faith, highly religious individuals are sometimes characterised as being closed-minded or dogmatic (Delener 1994). Alternatively, these individuals could be more positively viewed as

having the courage of their convictions. This notion of commitment is strongly represented in the fundamentalist aspect of religiosity, as fundamentalists believe in strict adherence to the doctrines of their faith. There is evidence that the expression of religious commitment may extend beyond religion itself, with highly religious individuals exhibiting commitment in many aspects of their life, including family, relationships and consumption behaviour.

There have been several investigations of the relationship between religiosity and consumer behaviour with the general conclusion that the association is real. In an empirical study of religiosity and consumer behaviour among 602 mostly Protestant consumers, Wilkes, Burnett and Howell (1986) reached a significant conclusion that religiosity influences several aspects of consumer's lifestyle, which eventually may affect choices and/or choice behaviour. When age, income and sex were controlled, the researchers found that people with a higher degree of religious commitment tend to be satisfied with their lives, have a more traditional sex-role orientation and are more likely to be opinion leaders. Although additional findings were not statistically significant, results from their study also provided indication that consumers with greater religious commitment were less likely to use credit and more likely to prefer national brands of products.

In a review of "Consumer Behaviour and Born-Again Christianity", LaBarbera (1987) pointed out that the born-again Christians are characterised by lifestyle market behaviour and attitudes that are biblically based and are distinct in several aspects from other consumers. She noted that conservative born-again consumers were more favourable toward advertising than other consumers, that they tend to use Christian broadcast media and that they had an increased demand for Christian targeted goods

and services. LaBarbera (1987) further asserted that their spiritual qualities, rather than their economic accomplishments, determine their fundamental behaviour. These spiritual qualities are often translated into differences in their purchasing behaviour.

Delener and Schiffman (1988) reported a study on the relationship between religiosity and the role structure of husbands and wives in family decision-making process. The findings demonstrated that for major durable goods in Catholic households, husbands were the major influence in most of the purchase decisions. In contrast, in Jewish households, husbands and wives shared equally in making most purchase decision. Their findings also indicated that husbands in pro-religious households were the dominant influence in purchasing major durable goods, as the decision making process progressed from problem recognition to final decision. In non-religious households, husbands and wives were substantially more likely to make purchasing decisions jointly as compared to their counterparts in non-religious households.

In a similar study, Delener (1994) found that the role structure of husbands and wives varies over the course of the automobile purchase decision-making process. In pro-religious Jewish households and pro-religious households in general, husbands were found to be more influential in deciding where to purchase an automobile. His findings also indicated a strong influence of religion affiliation and religious orientation on household decision behaviour patterns. In pro-religious Catholic and non-religious Jewish households, husbands and wives jointly decided where to purchase and what colour of automobile to purchase. On the other hand, in pro-religious Jewish households, husbands and wives decided when to purchase and what colour of automobile to purchase respectively.

Delener (1989) investigated differences in external search information and media usage patterns of Catholics and Jews, and the associated influence of religiosity. The findings indicated that Jews searched for information more than Catholics and that the difference was greater for non-religious consumers. He also found differences in media usage between the two groups attributed to the religiosity of consumers in each religious group.

In a study of religious influences on consumer innovativeness, Delener (1990a) used two types of measures of innovativeness: willingness to try new brands and a direct measure of innovativeness. The study showed that Jews were more willing than Catholics to try new movies, new books and new magazine. He also found that religious Catholics were more brand innovative than non-religious Catholics. In contrast, non-religious Jews were found to be more brand innovative than religious Jews. His findings are fairly consistent with those described by Hirschman (1981) who found that Jews to be more innovative than non-Jews and to be potentially less store and brand loyal.

There have been a few empirical studies that correlated religiosity to perceived risk and uncertainty. John et al. (1986) found a relationship between religiosity and willingness to try new products and perceived risk. In a study on geographic subcultures in the U.S., Gentry et al. (1988) reported that residents in areas with higher levels of religiosity perceive higher levels of risk with new products. A study by Delener (1990b) explored the effects of religiosity on perceived risks and uncertainty in durable good purchase decision. His study was on affluent Catholics and Jewish households in the Northeast of United States for the purchase of new cars and microwave ovens. The findings of the study suggested that Catholics were more

likely to be sensitive to any potentially negative consequences of their purchase decisions. This sensitivity was more apparent among consumers with a high degree of religiosity. This attitude relates to the tendency of highly religious individuals to be less secure and low in self-confidence as compared to less religious individuals.

Another stream of research involves those studies that investigate the relationship between religiosity and consumer behaviour related to purchasing and retail patronage behaviour. McDaniel and Burnett (1990) investigated the influence of religiosity on the importance of various retail department store attributes held by consumers. In this study, religiosity was viewed from two perspectives: religious commitment and religious affiliation. The results of this study show that one aspect of religiosity, religious commitment, particularly measured by cognitive religiosity and one aspect of behavioural religiosity are significant in predicting the importance individuals place on certain retail evaluative criteria. Consumers with a high degree of cognitive religious commitment viewed sales personnel friendliness, shopping efficiency, and product quality as being of greater importance in selecting a retail store than did those low in cognitive religious commitment. Religious contribution, a behavioral component of religious commitment, was positively and significantly associated with sales personnel friendliness/assistance and credit availability.

LaBarbera and Stern (1990) explored the impact of religiosity on repeat purchase behaviour. Specifically, the study investigated whether intensity religious Jews engage in a higher level of repeat purchase behaviour as compared to their non-intensity religious Jewish counterparts. Repeat purchase behaviour was measured by three distinct components: proportion of total purchases of a particular brand, individual's reaction to the absence of their favourite brand and the size of price

incentive to induce brand switching. Using six non-durable products as the items of investigation, they found that Orthodox and non-Orthodox Jews were differed significantly in their repeat purchase behaviour for detergent, orange juice, aluminium foil and toilet tissue for one of the three measures.

In one of the few articles discussing religiosity effects on shopping behaviour, Smith and Frankenberger (1991) reported that the level of religiosity was positively related to age and that it affects quality sought in a product, the social risk involved with a purchase and price sensitivity. However, no significant effect of religiosity on brand loyalty was evidenced. When the effect of religious affiliation was controlled, it was found that the level of religiosity was related only to product quality and price sensitivity.

Rodriguez (1993) investigated the effect of religiosity on the purchasing patterns of consumers in Peru. The findings indicated that the degree of religiosity influences the purchasing patterns of the middle and lower socioeconomic groups of the Peruvian population. In the upper class group, the influence of religiosity on the purchase behaviour was found to be indecisive even though this group was considered the most religious. His latent structure analysis of religiosity further suggested that individual and social consequence in the high group and religious values and practices in the middle and lower socioeconomic groups are the central dimensions that explain religiosity. The researcher concluded that religion, as a source of values in Peruvian Catholic societies, does not maintain its independence and is related to material behaviours.

The impact of religion on consumer behaviour can differ from one culture or country to another. Sood and Nasu (1995) conducted a cross-cultural comparison of the effects of religiosity on general purchasing behaviour for a sample of Japanese and

American consumers. The findings of the study suggested that there is no difference in consumer shopping behaviour between devout and casually religious Japanese individuals. This could be attributed to the fact that religion is not an important element in the overall Japanese culture. On the other hand, in the U.S., devout Protestants were found to be more economic, buying product on sale, shopping in stores with lower prices, being open to buying foreign-made goods, believing that there was little relation between price and quality, tending to not believe advertising claims while preferring subtle and informative advertisements.

Consequent to the findings of a study by Sood and Nasu (1995), Essoo and Dibb (2004) conducted a similar study in the island of Mauritius involving Hindu, Muslim and Catholic consumers. The results confirmed that consumers having different level of religiosity differ notably in their shopping behaviour. In particular, devout Hindus were found to differ from their casually religious counterparts in four shopper types: the demanding, practical, thoughtful and innovative shopper. In the case of Muslim consumers, their findings suggested that there is no difference in consumer shopping behaviour between devout and casually religious Muslim consumers, except for the trendy shopper type. Devout Catholics, on the other hand, were found to differ from their casually religious counterparts in four types of shopper: the demanding, practical, trendy and innovative.

Siguaw, Simpson and Joseph (1995) conducted a comparative study of the effects of religiosity on Sunday shopping behaviour for the U.S. and New Zealand samples. In the U.S., individuals with high spiritual religiosity were found to be more satisfied with local shopping conditions and less likely to shop outside their local trading area than their less religious counterpart. More religious shoppers were also

more likely to shop fewer Sundays during the year and to believe that non-essential businesses should close on Sundays. The only significant effects of religiosity on shopping behaviours of the New Zealanders were on the belief that non-essential businesses close on Sunday and satisfaction with local shopping. The researchers also noted that shoppers in the U.S. were much more religious than those in New Zealand and as a result of the religiousness, they were more likely to believe that non-essential businesses should close on Sundays, to spend a greater percentage of retail expenditures on Sunday shopping and to be more satisfied with local shopping than New Zealanders. New Zealanders on the other hand were much more likely to outshop and to spend more Sundays shopping than U.S. consumers, although consumers in the U.S. spent a larger percentage of their retail dollars outshopping than did the New Zealanders.

A study conducted by Siguaw and Simpson (1997) in five small towns centring around Ruston, Louisiana, demonstrated the effect of consumers' religiosity on their Sunday shopping and outshopping behaviours. In particular, the finding indicated a negative effect of religiosity on the propensity to shop on Sunday. Individuals with high levels of giving to their church (monetarily and of their time) were found to spend fewer Sundays shopping per year and to spend significantly less of their total retail purchasing dollars on Sundays. In addition, consumers with high spiritual and devotional values were found to spend significantly less of their money for outshopping and to believe that non-essential business should be closed on Sundays.

LaBarbera and Gurhan (1997) provide empirical results which demonstrate significant differences between born-again (evangelical) and non-born-again

Christians regarding the role of income and materialistic attitudes in predicting their subjective well-being. As compared to non born-again consumers, income and some facets of materialism have a negative relationship with the subjective well-being of born-again Christians. Religious values emphasising qualities such as family and relationship with God in preference to economic accomplishments and possessions may render income to be less significant in impacting consumer subjective well-being among born-again Christians.

Evidence also exists of religiosity effects on consumers' attitudes toward advertising messages. Michell and Al-Mossawi (1995) conducted an experiment to test the mediating effect of religiosity on advertising effectiveness among British Christians and Muslims. They found that both Christians and Muslims respondents with higher level of religiosity had significantly less favourable attitudes towards the contentious message and conservative Muslims had much lower recall scores than liberals. In their experimental study of religiosity influences on message contentiousness among Bahraini Muslims, Michell and Al-Mossawi (1999) found that religiously stricter Muslims have significantly lower recall and a more negative attitude towards messages perceived as contentious. However, their recall and attitude scores for non-contentious advertisement messages are similar to those of subjects with lower levels of religiosity. These findings imply that there is a difference in perceived controversial elements in television commercials between a devout and a liberal Muslim.

The evidence from the foregoing discussion is that religiosity plays a significant role in influencing several aspects of consumer behaviour. Religiosity has been shown to influence one's makeup and lifestyle, information search, purchase risk

aversion, attitude towards advertising, purchasing behaviour of major durables and selected aspects of retail store patronage behaviour. Thus there is ample evidence to support the application of religiosity in explaining consumer behaviour. The following section discusses previous attempts in measuring religiosity and the application of such measures in consumer research.

2.6 Measurement of Religiosity in Consumer Research

In a bid to fully understand the essence of religiosity as a construct in models of consumer behaviour, it is necessary to review the measurement of religiosity used in consumer behaviour studies.

In the pertaining literature, religion has been couched as an individual's religious affiliation or level of spiritual commitment. There is a critical distinction between these two constructs; religious affiliation, like ethnicity and nationality, is largely an ascribed condition, whereas religious commitment, or religiosity, is mainly a personal phenomenon. In early empirical studies on religion and consumer behaviour, it was religious affiliation or denomination that was measured (Engel 1976; Thompson and Raine 1976; Hirschman 1981, 1982a, 1982b, 1982c, 1983, 1985; Delener 1987). It has been measured relative to denominational membership or faith identification of the individual (e.g. Catholic, Protestant, Jews). The study design evaluated these religions while controlling for known differences in socio-economic status that existed across the religious groups. Strength of religious affiliation was similarly measured and assumed constant across religious groups. Unfortunately, one limitation of this "organisation approach" is that it is quite difficult to distinguish the effects of characteristics of religious affiliation from those of actual religiousness. Thus, in the

later studies, the religious construct has been operationalised using religious commitment or religiosity in addition to religious affiliation as a measure of the degree to which beliefs in specific religious values and ideals are held and practiced by an individual (Wilkes et al. 1986; LaBarbera and Stern 1990; McDaniel and Burnett 1990, Smith and Frankenberger 1991; Delener 1990a, 1990b, 1994; Rodriguez 1993; Sood and Nasu 1995; Siguaw and Simpson 1997; Essoo and Dibb 2004).

Wilkes et al. (1986) contend that religiosity cannot be viewed in academic research as a single, all-encompassing phenomenon and thus church attendance alone is not a satisfactory measure of religiosity. In their study, the dimensionality of religiosity construct was assessed with four items: church attendance, confidence in religious values, importance of religious values and self-perceived religiousness. Frequency of church attendance was measured through the use of a statement “I go to church regularly” with a “strongly agree” to “strongly disagree” scale with six point intervals. The perceived importance of religious values was determined through respondents’ evaluations of a statement “Spiritual values are more important than material things” with the same response alternatives. Confidence in religious values was similarly determined through respondents’ evaluations of the statement, “If Americans were more religious this would be a better country.” Those measures were dispersed among a larger set of lifestyle statements about a variety of topics in the domain of consumer choice behaviour. Finally, self-perceived religiousness was measured by requesting the respondents to evaluate their feelings of religiousness and to characterise themselves as being either very religious, moderately, slightly, not at all or antireligious.

McDaniel and Burnett (1990) initiated an alternative approach of measuring religiosity for consumer research by operationalising religious commitment in terms of cognitive and behavioural measures of religiosity. The cognitive dimension, defined as the “degree to which an individual holds religious beliefs” (McDaniel and Burnett 1990, p. 103), was composed of three summated items designed to evaluate the importance of religion with no report of internal scale reliability: self-ascribed religiousness (i.e. “Indicate how religious you view yourself to be”) with five choices ranging from “very religious” to “anti-religious” and two religious-oriented questions interspersed within a list of AIO-related questions: “My religion is very important to me” and “I believe in God”, measured on six-point scale of agreement/disagreement. The behavioural dimension was assessed and analysed as two separate factors. The first factor is church/synagogue attendance (i.e. “how often do you attend services/meetings?”) with three levels of attendance: rarely/never (less than one time a year or never), moderate (once a year to three times a month) and frequent (four or more times a month). The second factor related to the amount of monetary donations given to religious organisations, measured on three levels of donations (no donations or 0% of after-tax income, moderate donations or 1 to 5% of after-tax income and high donations or over 6% of after-tax income).

Another popular approach to measure religiosity in consumer research has been the operationalisation of the construct either as a means to reach self-centred ends or as an end in itself using Allport and Ross (1967) intrinsic-extrinsic Religious Orientation Scale (ROS). According to Allport and Ross (1967), intrinsically religious people are genuinely committed to their faith, while extrinsically religious people are more self-serving. They stated that, “the extrinsically-motivated person uses his

religion, whereas the intrinsically-motivated lives his religion” (p. 434). To be high intrinsic is to be a true believer in religious practice for its own sake. To be high extrinsic is to view religious practice as an avenue to a social or personal end (e.g. comfort, acceptable).

Table 2.11 presents the ROS developed by Allport and Ross. The ROS has proven to have acceptable reliability and has shown some indication of applicability for marketing in general and consumer research in particular (Delener and Schiffman 1988; Delener 1989, 1990a, 1990b, 1994; Essoo and Dibb 2004). However, some researchers recently raised their concern on the direct usefulness of the scale in marketing research. Singhapakdi et al. (2000) for example stressed that the basic idea of the scale is to differentiate those who view their practice of religion as a goal in itself (intrinsic orientation) from those who view it instrumentally (extrinsic orientation). They further state that “it is difficult to imagine any research in marketing that would need this distinction; only the degree of religiosity that results in behaviour is of interest in marketing, and only intrinsic translate their religiosity into behaviour” (p. 311).

Table 2.11 The religious orientation scale (I-E scale)

Statements	SA	A	N	D	SD
1. I enjoy reading about my religion.	1	2	3	4	5
2. I go to church because it helps me make friends.	5	4	3	2	1
3. It does not matter what I believe so long as I am good.	5	4	3	2	1
4. Sometimes I have to ignore my religious beliefs because of what people might think of me.	5	4	3	2	1
5. It is important for me to spend time in private thought and prayer.	1	2	3	4	5
6. I would prefer to go to church:					
A few times a year.	5				
Once every month or two.	4				
Two or three times a month.	3				
About once a week.	2				
More than once a week.	1				
7. I have often had a strong sense of God presence.	1	2	3	4	5
8. I pray mainly to get relief and protection.	5	4	3	2	1
9. I try hard to live all my life according to my religious beliefs.	1	2	3	4	5
10. What religion offers me most is the comfort in times of trouble and sorrow.	5	4	3	2	1
11. My religion is important because it answers many questions about the meaning of life.	1	2	3	4	5
12. I would rather join a Bible study group than a church social group.	1	2	3	4	5
13. Prayer is for peace and happiness.	5	4	3	2	1
14. Although I am religious I don't let it affect my daily life.	5	4	3	2	1
15. I go to church mostly to spend time with my friends.	5	4	3	2	1
16. My whole approach to life is based on my religion.	1	2	3	4	5
17. I enjoy going to church because I enjoy seeing people I know there.	5	4	3	2	1
18. I pray chiefly because I have been taught to pray.	5	4	3	2	1
19. Prayers I say when I am alone are as important to me as those I say in church.	1	2	3	4	5
20. Although I believe in my religion, many other things are more important in life.	5	4	3	2	1

Source: Allport and Ross (1967)

Perhaps the most serious shortcoming of the ROS is that they were specifically designed for use with Christian or Judeo-Christian subjects. Thus, direct adaptation of the scale is not always feasible and valid to measure the degree of religiosity of other than Judeo-Christian religions, although the scale has been used in one study involving Muslim and Hindu subjects in Mauritius (Essoo and Dibb 2004). Genia (1993), as a result of his psychometric evaluation of the ROS, recommends that the item measuring frequency of worship attendance be dropped, because it “presents theoretical as well as methodological problems” (p. 287). In measuring Islamic religiosity, for instance, this item applies only to men because they are obligated to attend worship in congregation at mosque at least once a week on Friday. The intrinsic items on the scale have also been shown to lack internal consistency and to be of questionable value for other than Christian religions (e.g. Genia 1993). One item for example, is “If I were to join a religious group I would prefer to join (1) a Bible study group or (2) a social fellowship.”

In studying the relationship between Jewish religious intensity and repeat purchase behaviour, LaBarbera and Stern (1990) used two different measures of religious intensity; one for Orthodox Jews and the other for non-Orthodox Jews. Michell and Al-Mossawi (1995), in their experiment to test the mediating effect of religiosity on advertising effectiveness among British Christians and Muslims, also used two different sets of religiosity measures.

Similarly, in their cross-cultural study of consumer behaviour in Japan and the U.S., Sood and Nasu (1995) developed two different measures of religiosity (see Table 2.12). The measurement was based on the responses to nine questions related to belief in the religious practice or activity, the moral consequences and experience dimension or self-rating of one’s religiosity. The first question addresses personal

activity in one's religion; the second and third questions were concerned with the perceived importance and confidence in religious values; the fourth was a self-evaluation of one's religiosity; and the last five questions were purposively directed to one's beliefs in the basic tenets of one's religion. The average score on the nine questions becomes the degree of religiosity of the respondents. The calculated reliability based on the internal consistency of these nine items ranged from 0.59 to 0.65 for the Japanese Shinto sample and from 0.79 to 0.82 for the American Protestant sample.

Table 2.12 Measurement of Shinto and Protestant religiosity

Japanese Shinto	
1. I go to a place of worship regularly.	SD-SA
2. Spiritual values are more important than material gains.	SD-SA
3. Religious people are better citizens.	SD-SA
4. How do you characterise yourself?	NR-VR
5. Supreme reality is beyond the comprehension of the human mind.	SD-SA
6. Religion is self-education in conquering pain, sorrow and suffering.	SD-SA
7. A person has an indefinite number of lives.	SD-SA
8. The individual person is not important.	SD-SA
9. One should strive for inner purity through contemplation and ceremonial acts.	SD-SA
American Protestant	
1. I go to a place of worship regularly.	SD-SA
2. Spiritual values are more important than material gains.	SD-SA
3. Religious people are better citizens.	SD-SA
4. How do you characterise yourself?	NR-VR
5. Jesus Christ is the Son of God.	SD-SA
6. Individuals are free to approach the Lord for themselves.	SD-SA
7. The Bible is the word of God.	SD-SA
8. Man is responsible in his freedom to exercise his will for good.	SD-SA
9. The soul of man is immortal.	SD-SA

Source: Sood and Nasu (1995, p. 3)

More recently, Khraim et al. (1999) developed dimensions for measuring Islamic religiosity in the Malaysian context. The dimensions used in their study were directed more toward practical behaviour. The dimensions were: Islamic financial services, seeking religious education, current Islamic issues and sensitive products. The researchers argued that the rationale of using these four dimensions was “to encompass as many issues as possible so that the dimensions reflect the tenet that Islam is a complete way of life rather than as a bundle of rituals in the narrow religious sense” (p. 655). As a result of factor analysis, seven factors were extracted. The correlation result showed that the combination of three dimensions (current Islamic issues, religious education and sensitive products) yields the best results among the four dimensions.

Table 2.13 summarises previous studies which offer empirical evidence of several important dimensions of religiosity. From these studies, some general conclusions can be drawn: a consumer’s religiosity is a distinct concept which can be measured from various perspectives. While there is some disagreement in the literature regarding the precise number of dimensions to employ in measuring it, most researchers agree that religiosity is multidimensional in nature. In addition, almost all the empirical studies seeking to specify dimensions of religiosity have been from a Christian perspective and developed with Christian subjects.

Table 2.13 Dimensions of religiosity in consumer research

Author(s) and year	Name of dimensions
Wilkes, Burnett and Howell (1986)	Church attendance, importance of religious values, confidence in religious values, self-perceived religiousness
Delener and Schiffman (1988)	Intrinsic orientation, extrinsic orientation
LaBarbera and Stern (1990)	Jewish religious intensity (dimensions not specified)
Delener (1989, 1990a, 1990b, 1994)	Intrinsic orientation, extrinsic orientation
Esoo and Dibb (2004)	Intrinsic orientation, extrinsic orientation
McDaniel and Burnett (1990)	Cognitive commitment, behavioural commitment
Rodriguez (1993)	Church attendance, importance and confidence in religious values, self-perceived religiousness, religious beliefs, experience and practices
Sood and Nasu (1995)	Personal activity in one's religion, importance and confidence in religious values, belief in the basic tenets of one's religion, self-evaluation of one's religiosity
Siguaw, Simpson and Joseph (1995)	Cognitive commitment
Turley (1995)	Traditional Christian beliefs, religiosity, confidence in the Church, permissiveness, civic morality
Michell and Al-Mossawi (1995, 1999)	Religious commitment (dimensions not specified)
Siguaw and Simpson (1997)	Spiritualism, devotion
Khraim, Mohamad and Jantan (1999)	Banking and insurance, public Islamic issues, individual Islamic issues, sensitive products, food consumption, religious education, ethics

2.7 Summary

Religion is one of the most important contributors of culture, personal identity and values, all of which have consumption implications. Religion influences an entire way of life through socialisation and is a continuing key force in individual and social behaviour. It emphasises the cultural and institutional sides of human encounters with God and/or transcendent reality. This metaphysical belief brings sacred values embodied in a society to personality systems. Religious values provide the individual not only with a certain form of acts and spiritual rituals but also with standards of behaviour and a general worldview. Thus religion can form the basis of how an individual chooses to lead his/her life.

The empirical findings reviewed in this chapter provide some intriguing evidence of a causal link between religion and consumption, both in terms of cognitive and conative behavioural aspects. Findings suggest that intangible differences exist among diverse religious groups and exhibit themselves in distinct religious customs, rituals, material artefacts and consumption. In addition, some contributions have been made concerning the effect of religiosity on several aspects of consumer behaviour. In general, religion influences the consumption activities and consumers' behaviour through three different ways: (i) it affects the structure of consumption; (ii) it creates and communicates meaning in products and services and (iii) it influences how individuals make their decision.

It is important to note, however, that most prior studies on this topic have been conducted among American population who are predominantly Jews, Catholics or Protestants. As such, little can be said about the robustness of previous findings in other religious contexts and cultural settings. Furthermore, most of prior findings were

limited to only one product type, namely a relatively high involvement item such as a television and stereo system. Thus, there is a need to identify whether religion influences the purchasing behaviour of other product classes.

In the next chapter, empirical evidence on consumer retail patronage behaviour from past studies will be considered. To develop the theoretical foundation for the present study, the researcher attempts to trace religious input from the selected models of retail patronage behaviour. Then, the concept and ideas of the initial framework are consolidated with other empirical findings in order to build up the research model on which the present research is based.

CHAPTER 3

RETAIL PATRONAGE BEHAVIOUR

3.0 Introduction

As delineated at the outset of this thesis, the purpose of this study was to examine the religious influences on aspects of retail patronage behaviour. The literature review presented in the previous chapter has emphasised the linkages between religion and aspects of consumer behaviour. Evidence from this small body of literature has suggested that both religious affiliation and religiosity are significant predictors of consumer behaviour.

In this chapter, the researcher explores several bodies of literature related to retail patronage behaviour in order to be familiar with previous studies on the consumers' retail patronage behaviour and to provide the theoretical underpinning for the study. The chapter is divided into three major sections as follows. In the first section, the researcher reviews the existing models of retail patronage from a consumer behaviour perspective. More specifically, models and concepts developed by Darden (1980) and Sheth (1983) are discussed to provide the framework for this study. The conceptual model of the present study will be presented in the second section. The following components of the model will be reviewed: personal characteristics, information sources, shopping orientations, store attributes and store patronage. The third section outlines the hypotheses of the study. This chapter concludes with a summary of the overall discussion.

3.1 Models of Retail Patronage Behaviour

Over the past three decades, at least twelve theoretical models of patronage behaviour have been documented in the retailing literature (Monroe and Guiltinan 1975; Darden 1980; Moller and van den Heuvel 1981; Lusch 1981; Bellenger and Moschis 1982; Falk and Julander 1983; Paltschik and Strandvik 1983; Sheth 1983; Laaksonen 1987; Spiggle and Sewall 1987; Lusch, Dunne and Gable 1990; Osman 1993). These models, along with other research in this area, have attempted to explain “all the possible inner features of dynamism around the shopping behaviour phenomenon in terms of store choice” (Laaksonen 1987, p. 12). Accordingly, various approaches have been taken and assorted variables have been investigated in an attempt to gain understanding of retail patronage behaviour.

For investigation in the present study, two patronage behaviour models will be examined, namely Darden’s (1980) patronage model of consumer behaviour and Sheth’s (1983) integrative theory of patronage preference and behaviour. These two models are of particular interest because they are highly commendable as they represent initial efforts at developing comprehensive explanations of consumers’ patronage behaviour (Darden and Dorsch 1989). These models will be studied to find out what are the main attributes that were seen to be important in the explanation of patronage behaviour. In addition, for each model reviewed, an attempt will be made to trace the religious input which might directly or indirectly influence some aspects of patronage activities.

3.1.1 Darden's Patronage Model of Consumer Behaviour

The focal point of consumer behaviour theory and research has traditionally been directed to the explanation of brand choice behaviour, perhaps because the roots of consumer research lie in manufacturing of consumer products (Darden 1980). In the past, theoretical conceptualisation of acquisition behaviour was dominated by models of product or brand choice (e.g. Howard and Sheth 1969). These models have largely overlooked the consumer's selection of the retail establishment. A large body of marketing literature has demonstrated that while brand choice may certainly be one factor contributing to retail store selection, there, nonetheless, exists a large array of possible shopping motives.

As an approach to this and other issues, Darden (1980) put forward a patronage model of consumer behaviour based on multi-attribute attitude theories with an objective to operationalise consumer patronage intention. The model was developed based on the research work of a number of past researchers and "from the observation of a number of seemingly inconsistent phenomena in marketing" (Darden 1980, p. 43). He strongly believes that "patronage choice behaviour might actually be more important than that of brand choice behaviour" (Darden 1980, p. 43). Darden explained why patronage choice behaviour is more important than brand choice behaviour to retailers. He argued that shopping trips are separate phases in the purchase process. Since many consumers make periodic and even regular shopping trips to a retail store to "buy something" or to "see what is available", patronage choice is logically prior to brand choice (Darden 1980, p. 44). In other words, consumers first choose stores in which to shop without a consideration of brands. Then brand comparisons are made between those that are carried by the store (or

stores) that are visited on the particular shopping trip. Thus, the underlying philosophy of Darden's model is that store selection is logically prior to brand choice behaviour, and that brands carried is only a retail store attribute. The result is a model that reflects the "real-world" experiences of most consumers.

Compared to other models (e.g. Monroe and Gultinan 1975), the model gave a more comprehensive picture of patronage behaviour, which takes into account both product and store choices (products are viewed as determinants of store attribute importance) and further both single purchase as well as multi purchase shopping trips are included. Darden developed his patronage model based on the following ideas and presumptions:

- patronage and buying behaviour are separate phases in the purchase process;
- consumers may choose stores in which to shop without a consideration of brands at all, which draws attention to the necessity to keep product choice as a variable related to store choice;
- retail outlets are relatively permanent; and
- a multi-attribute approach was accepted as model construct.

Darden included three important elements in his patronage model: (a) shopping orientations, (b) experience and (c) patronage behaviour. First, the researcher posits shopping orientation as one of the key variables that determine the general character of consumer behaviour. Shopping orientation is seen to be influenced by personal characteristics such as terminal and instrumental values, lifestyle, life experience, stage in family lifecycle, social class and media habits. It is also hypothesised that shopping orientations to a large extent determine the importance of salient store attributes which in turn, impact on patronage behaviour.

Darden suggested that importance of store attributes, as well as inhibitors such as income, time and social pressure create patronage intentions that determine patronage behaviour and result in stores being visited and products being purchased. This reflects the influence of both market-dominated and consumer-dominated variables. Thus shopping orientations and patronage behaviour could be viewed as variables of market and consumer interaction.

The second important element of the model is experience. Experience can be viewed as a feedback process variable that influences both overall behavioural tendency (i.e. patronage pattern) and specific beliefs concerning store attributes. Finally, the third key element of the model is patronage behaviour. The final patronage behaviour is seen as a result of both patronage intentions and inhibitors. Inhibitors however, are viewed to be dependent only on external circumstances.

In summary, Darden suggested that (a) brand preferences should be viewed as only one of many preferred patronage attributes; (b) consumer patronage behaviour is an important area for study, both in its own right and as prior to and affecting brand choice; and (c) a comprehensive model of patronage behaviour needs to be tested. Figure 3.1 depicts the Darden's patronage model of consumer behaviour. Past empirical evidence concerning the partial verification of the model is discussed next.

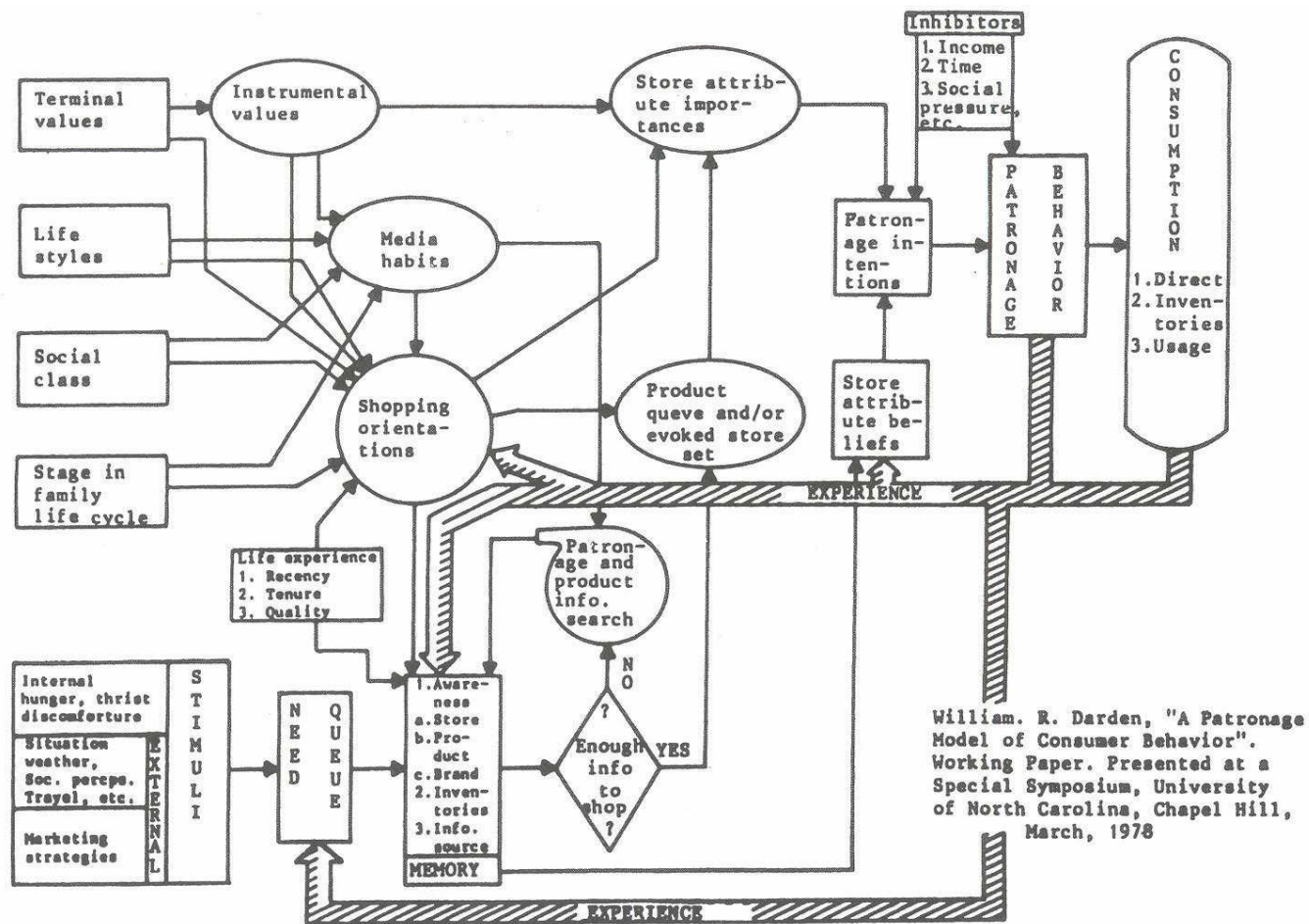


Figure 3.1 Darden's (1980) patronage model of consumer behaviour

There are some empirical studies have been conducted to partially verify Darden's (first presented 1978, proceedings published 1980) model in regards to shopping orientation. First, in an unpublished doctoral dissertation, Howell (1979) tested part of Darden's model by investigating the influences of antecedent variables on shopping orientations. His canonical correlation analysis produced results supporting quite well the relationships hypothesised in Darden's patronage model. In particular, shopping orientations were found to be influenced by instrumental values, general lifestyles, sex, social class and family life cycle. Terminal values, however, did not directly influence shopping orientation. This part of the model was then revised (see Figure 3.2). The verified relationships validate the shopping orientation concept as a domain-specific attitudinal variable.

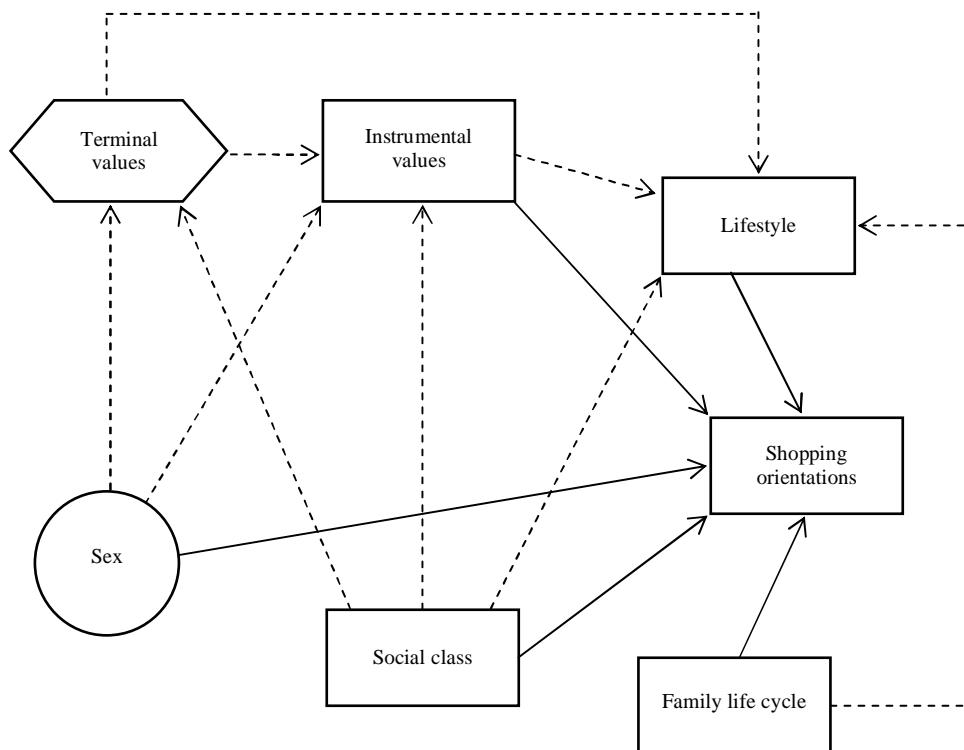


Figure 3.2 Howell's (1979, p. 142) model of shopping orientations

A second attempt to test Darden's model was made by Powell (1980). In his doctoral project, the researcher focused on the same portion of the Darden's model as Howell (1979) did, but further emphasised the influence of media habits on shopping orientation. According to his findings, terminal values should be kept as the determinant of both instrumental values and shopping orientation, as proposed by Darden (1980). In addition, instrumental values, generalised lifestyle, social class and age of the head of the household correlated with shopping orientation. However, the relationship of lifestyle to media habits, in this case magazine readership, and media habits to shopping orientations suggested minor revision of the Darden's model. These modifications were the addition of a media orientations construct, and the absence of a linkage between media habits and shopping orientations. Perhaps, one reason for this is that the media habit measure concerned merely magazine readership but not others. Nevertheless, support was given to Darden's (1980) model with regard to other variables chosen in the analysis. Based on these findings, Powell (1980, p. 75) concluded that the research supported the importance of the patronage behaviour approach instead of the decision-making approach when modelling consumer store choice behaviour.

Another similar attempt was made by Mason, Durand and Taylor (1983). The purpose was to partially test Darden's model by proposing terminal and instrumental values as antecedent variables influencing lifestyle, shopping orientation and store attribute importance. Both values were hypothesised to affect shopping orientation directly and indirectly through lifestyles. Shopping orientations, in turn, were hypothesised to influence store attributes directly, as were terminal and instrumental values. Mason et al. (1983) tested their model with the 296 female members of a

Parent Teacher Association. The results of the path-analysis showed some support for the earlier version of the model. The influence of values, however, was found to be restricted to only the attributes of importance. As displayed in Figure 3.3, only terminal values influenced the importance of store attributes which also influenced the instrumental values.

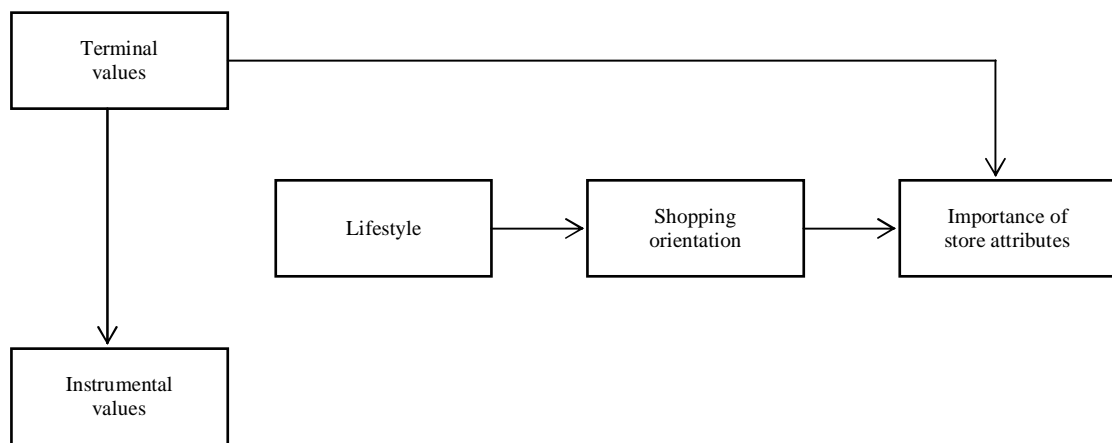


Figure 3.3 Mason, Durand and Taylor's (1983, p. 350) patronage model

Shim and Kotsiopulos (1992a, 1992b) adapted portions of Darden's (1980) patronage model of consumer behaviour to develop the model on patronage behaviour of apparel shopping. Shim and Kotsiopulos's (1992a, 1992b) studies contribute to our understanding of retail patronage with their innovative inclusion of patronage choice behaviour as the end of patronage process while excluding consumer values from the model. Use of information sources was another construct that the researchers included in the model as an influential factor of patronage behaviour which was also

hypothesised to be influenced by personal characteristics. They used linear regression to test the model.

In part one, Shim and Kotsiopoulos (1992a) examined the relationships among several variables. They were personal characteristics (the exogenous variables which include lifestyle activities, social class and family life cycle), information sources, store attributes, shopping orientations, and patronage behaviour. The results of multiple regression analyses revealed that all four variables were predictors of apparel patronage behaviour of discount stores, specialty stores, department stores and catalogue shopping. Shopping orientations and the importance of store attributes appeared to be the most influential factors in determining patronage behaviour, followed by information sources and personal characteristics. Thus, five significant relationships hypothesised by Darden (1980) were supported in their study: (a) importance of store attributes → patronage behaviour, (b) shopping orientations → importance of store attributes, (c) personal characteristics → shopping orientations, (d) information sources → shopping orientations and (e) personal characteristics → information sources.

In the second part of the study, Shim and Kotsiopoulos (1992b) tested and extended the model developed in part one. In addition to the relationships found in part one of the study, the researchers tested direct linkages among shopping orientations, store attributes and patronage behaviour and information sources, shopping orientations and store attributes. Results showed that two out of five proposed linkages were significant in explaining patronage behaviour: (a) shopping orientations → store attributes → patronage behaviour and (b) information sources → shopping orientations → store attributes. However, no direct links were found

between (a) personal characteristics and patronage behaviour, (b) information sources and patronage behaviour, and (c) personal characteristics and store attributes. Shim and Kotsiopoulos (1992b) concluded that patronage behaviour needs to be explained by two components: importance of store attributes and shopping orientations. Shopping orientations appeared to have a stronger impact on patronage behaviour than did store attributes. The study also revealed that store attributes were influenced by information sources and that information sources directly influenced the importance of store attributes. Based on these results, Shim and Kotsiopoulos (1992b, p. 63) developed a revised model of patronage behaviour as illustrated in Figure 3.4.

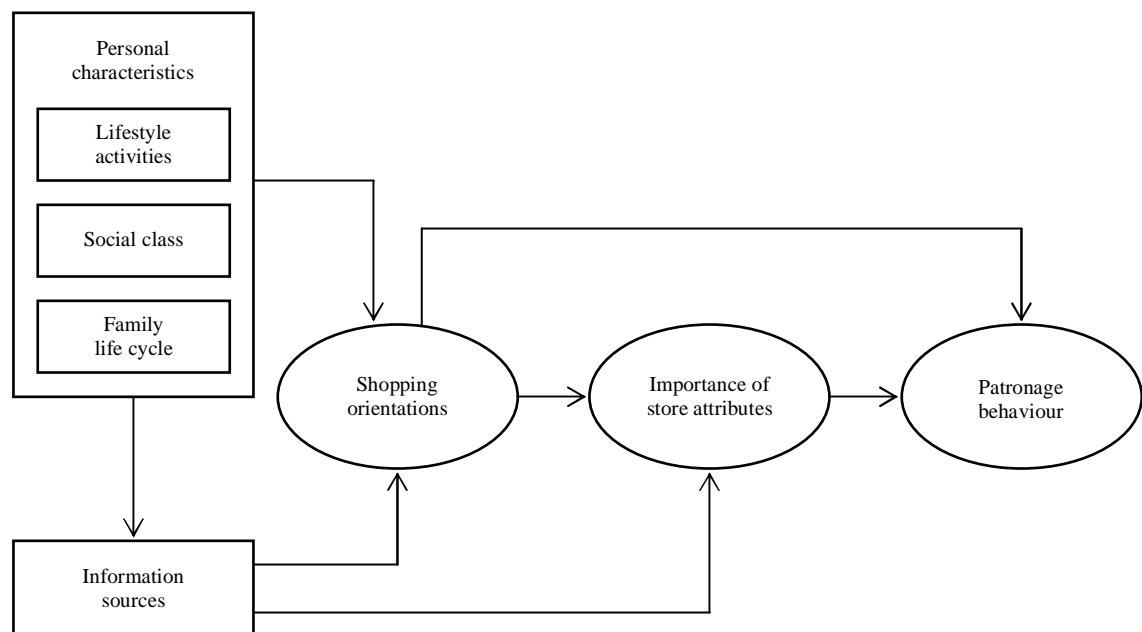


Figure 3.4 Shim and Kotsiopoulos's (1992b, p. 63) patronage model

More recently, in her doctoral dissertation, Welker (2004) tested the effectiveness of the patronage behaviour model derived from Darden's (1980) patronage model of consumer behaviour and Shim and Kotsiopoulos's (1992b) apparel retail patronage behaviour model to explain the patronage behaviour of small, retail apparel firms. Welker tested her proposed model with 147 female shoppers conveniently sampled at five small, retail apparel stores using Structural Equation Modelling (SEM). The results showed that that all of the proposed paths did flow as the model indicated. However, all of the proposed paths were not significant and four additional paths were added to improve the fit of the model. Only lifestyles effect on instrumental values was significant. The other added paths were social class and family life cycle effects on instrumental values and terminal values effect on information sources. Both terminal values and lifestyle had significant effects on shopping orientations. Shopping orientation had the largest causal effect on patronage behaviour with the "local store shopper" was the best indicator of small, retail apparel firm patronage. Twelve of the proposed paths in her model were not significant. Figure 3.5 displays the final structural equation model of patronage behaviour developed by Welker (note: dotted lines are not significant; solid lines are significant).

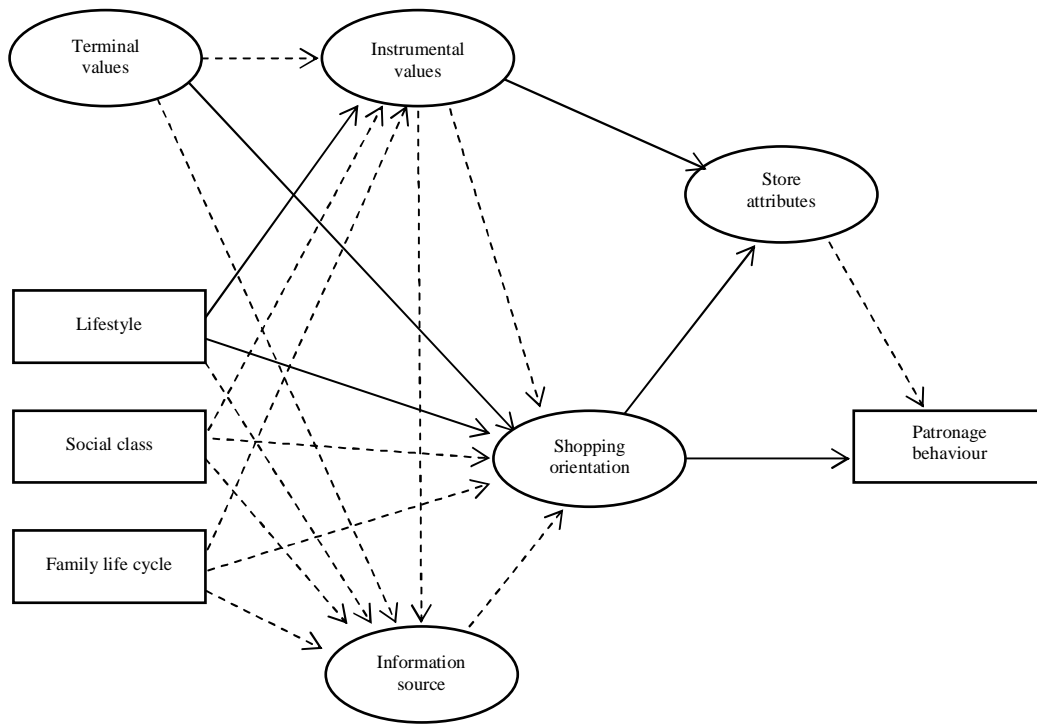


Figure 3.5 Welker's (2004, p. 63) structural equation model of patronage behaviour of small, retail apparel firms

The Darden model is particularly relevant to the present study since the variables it depicts as influencing store patronage have been used repeatedly in the literature to profile and delineate shopping patronage groups. Darden hypothesized that consumer values, lifestyle, shopping orientations and preference of store attributes give consumers a predisposition to choose a particular store in which to shop. Although some findings appeared to be inconsistent with Darden's model, the overall consensus of these studies indicates that both shopping orientations and store attribute importance are utmost important determinants of store patronage decision. Darden views shopping orientations as key constructs in any patronage choice model that "determine in large measure the saliences of store attributes" (p. 49). Also, it

seems evident from the model and its subsequent testing that lifestyle is the only variable generally verified as a determinant of domain-specific shopping orientation and therefore it should be taken into consideration when explaining shopping orientation.

Religious factors in Darden's patronage model

As with other retail patronage models (e.g. Monroe and Gultinan 1975), Darden's model does not specifically address religion or religious values of the consumer, but it is treated as a part of consumer values. The model includes Rokeach's (1973) two types of values: instrumental and terminal. In the Rokeach's sense, values are highly central and quite general, conceptualised as forming the basis for judgements in more narrowly defined situations or with specific referents. Rokeach views terminal values as being related to end-states of existence such as inner harmony (freedom from inner conflict) and belief in salvation (saved, eternal life), that is, of a religious nature. In Darden's model, these religion-related values are viewed as being exogenous and affecting retail store attribute importance through instrumental values. Darden also postulates that these terminal values affect shopping orientations and indirectly affect store attribute importance through shopping orientation.

3.1.2 Sheth's Patronage Behaviour Model

Sheth (1983) attempted to integrate existing substantive knowledge into a theory of patronage preference and behaviour. The proposed theory is at the individual level of patronage behaviour and is based on psychological foundations as it is designed for describing and explaining individual patronage behaviour. Sheth's theory is well-

grounded on various theories of retail preferences and behaviour that consist of two distinct sub-theories: the first limited to establishing a shopping preference for an outlet; while the second focusing on actual buying behaviour from that outlet. Sheth (1983, p. 11) contended the theoretical reasons for keeping these two processes separate as follows:

“It is argued that the two processes and their determinants are significantly different and therefore cannot be combined into a single conceptual framework with a common set of constructs. This is a radical departure from traditional thinking in social psychology, which holds that attitudes lead to behaviour. In fact, we shall focus on the shopping-buying discrepancy in the development of the patronage behaviour subsystem”.

This assumption is analogous with Darden’s (1980) theoretical bases that shopping and buying are two separate activities. From the perspective of the present study, the first sub-theory concerning shopping preference is of particular interest, since it provides a theoretical framework for examining the religious variable in a shopping context. The shopping preference subsystem consists of four basic constructs, together with their determinants and is illustrated in Figure 3.6.

Shopping predisposition refers to the relative shopping preference of the evoked set of outlet alternatives for a specific product class, such as shopping for clothing. The preferences are limited to those outlets which an individual considers acceptable to shop for a particular class of products, for example, an individual may consider a discount clothing store unacceptable where as a high fashion clothing store would be an acceptable place at which to shop for clothing. Shopping predisposition is affected by individual choice calculus (choice decision rules) which itself is affected by shopping motives and shopping options.

Choice calculus refers to the decision rules or heuristics utilised by the individual in establishing shopping predispositions toward certain retail outlets. These choice rules entail matching shopping motives and shopping options. According to Sheth (1983, p. 14):

“The integrative theory postulates utilisation of any of three classes of choice rules or heuristics. (...), the one they will use depends on the degree of past learning and experience related to shopping for that product class”.

Shopping motives refer to an individual’s needs and wants related to the choice of outlets from which to shop for a specific product class such as clothes. These motives are viewed as consisting of functional need and non-functional wants, the former is related to a consumer’s evaluation of various store attributes guided by time, place or possession requirement such as cost and availability of needed products, convenience in parking, shopping and accessibility to the outlets; while the latter is related to the association of various retail outlets with certain social, emotional and epistemic values. Sheth points out that it is important to distinguish between functional needs which are anchored to outlet attributes, and non-functional wants which are anchored to the outlet association. In that sense, functional needs are intrinsic to outlets whereas non-functional wants are extrinsic to the outlets. Sheth posited shopping motives to be influenced by demand size determinants, both personal and product characteristics.

Shopping options refer to the evoked set of outlets available to the individual to satisfy shopping motives for a specific class of products such as clothing. Shopping options are affected by market and company determinants such as location, retail institutions, merchandise and service. A large number of retail outlets may exist in a given trading area, but due to supply related factors like location, store hours,

merchandise and image, only a small number of outlets would actually be considered as options. The actual outlets considered will be determined to a large extent by the shopping motives however, and those deemed acceptable will be determined by the use of choice calculus.

The determinants consist of supply oriented and demand oriented factors, the supply side being broken down into market and company determinants while the demand side constructs include personal and product determinants. Each of the factors that make up these determinants has their own set of operationalised variables. There are three distinct market determinant factors: location, retail institutions, positioning and image, all of which determine the competitive structure of a trading area and therefore, an individual's general shopping options. Company determinants consist of merchandise selection, service, advertising and promotion, all of which influence and limit an individual's specific shopping options for a given product class (Sheth 1983).

Final constructs suggested by Sheth (1983) are product determinants which include product typology, usage typology, and brand predisposition, each of which is viewed as controlling and shaping specific shopping motives for a given product class purchase. On the other hand, personal determinants are viewed as being made up of personal values, social values and epistemic values which influence an individual's shopping motives. Figure 3.6 depicts Sheth's (1983) model of shopping preference theory.

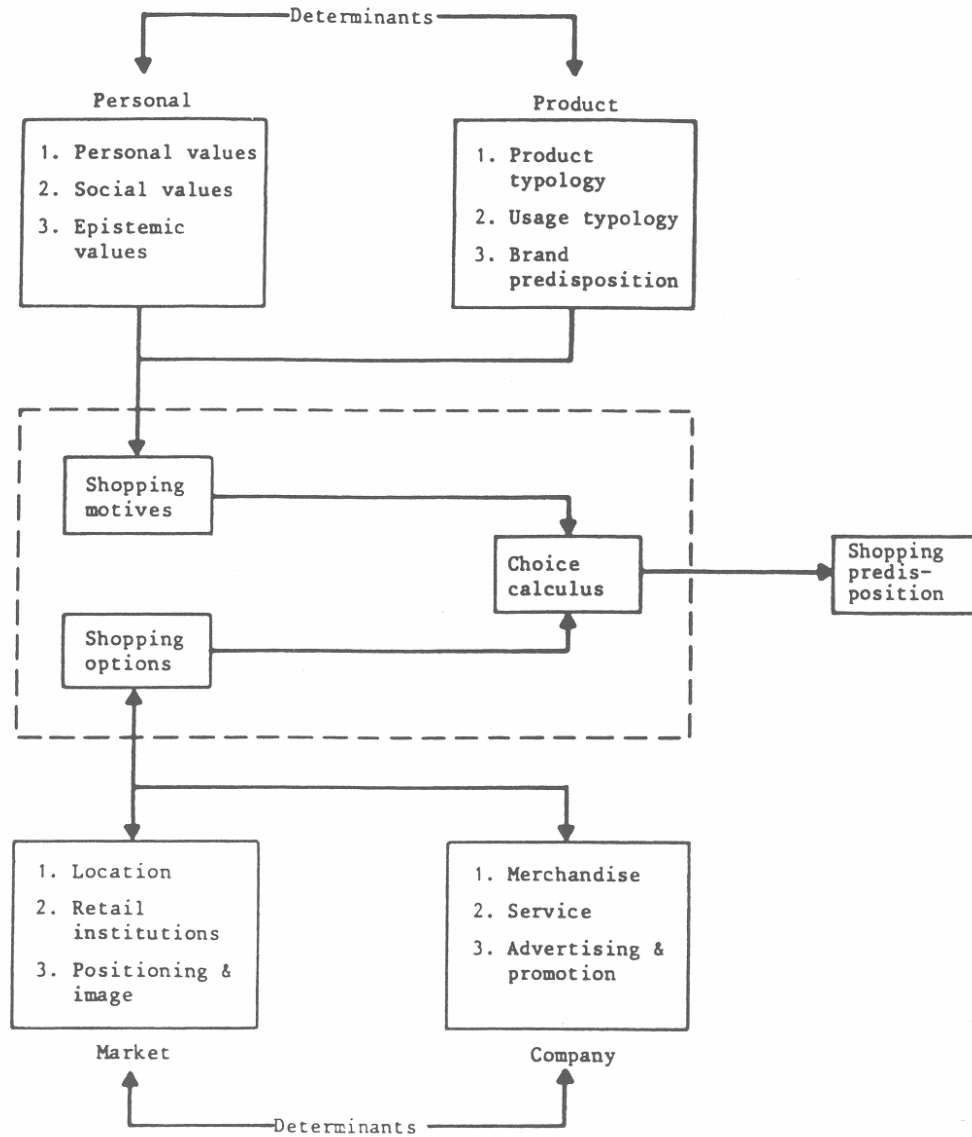


Figure 3.6 Sheth's (1983) model of shopping preference theory

The second part of Sheth's (1983) integrative theory of patronage behaviour is focused on the determinants finally influencing the actual purchase behaviour with respect to a specific product or service from an outlet. Figure 3.7 displays Sheth's (1983) model of patronage behaviour theory. It consists of four behavioural outcomes:

planned purchase, unplanned purchase, foregone purchase and no purchase behaviour. These alternatives refer to different amount of enduring and situational influence. Further, Sheth incorporates his model with four types of unexpected events, which are socio-economic setting, in-store marketing, personal setting and product setting. Sheth (1983, p. 26-27) maintained that all these factors represent “unexpected events that have either no effect or an inducement or inhibition effect on customer’s shopping preference”.

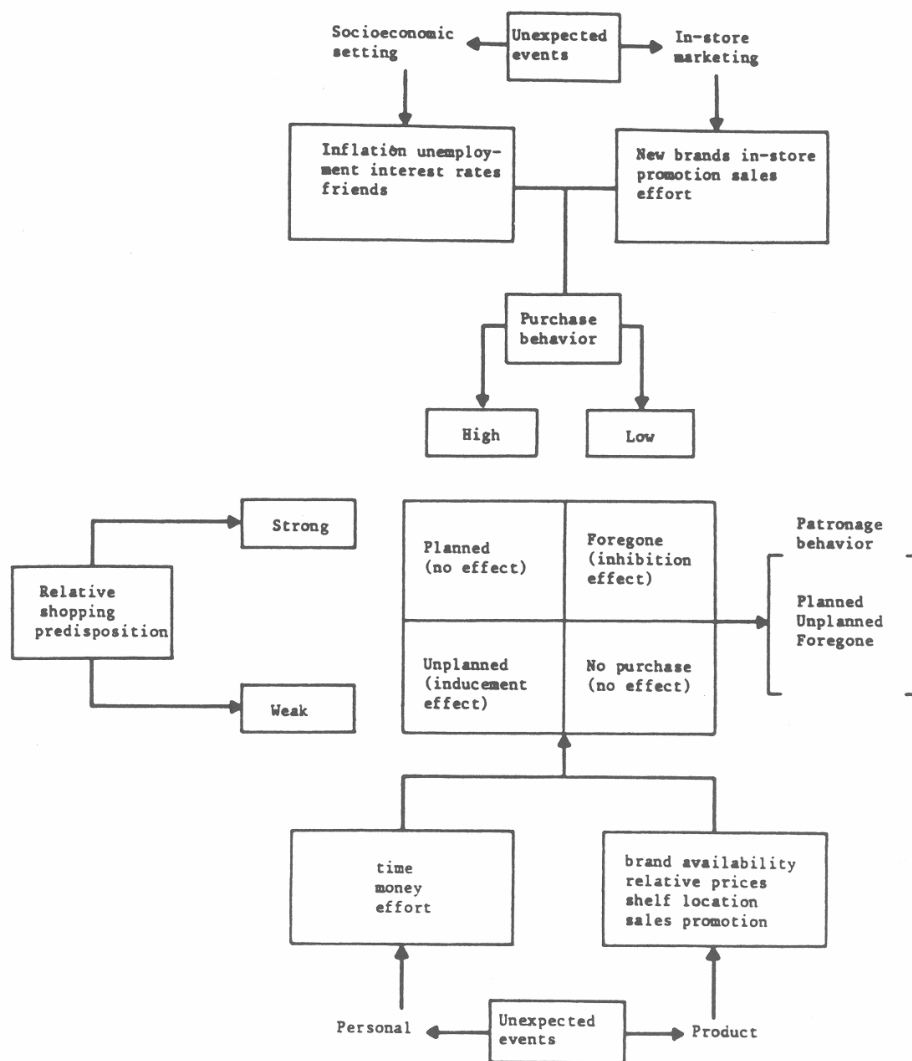


Figure 3.7 Sheth's (1983) model of patronage behaviour theory

Religious factors in Sheth's Patronage Model

Sheth's (1983) theory suggests that religion has the most likely affect on shopping predisposition through the demand side determinant – personal characteristics. In his theory, Sheth specifically cites religious variables in proposing that personal determinants (personal, social and epistemic values) shape an individual's shopping motives. The personal values reflect the consumer's personality and are indicative of the influence of values on consumer behaviour. He predicted that personal values might be related directly and indirectly to religion and religiosity. According to Sheth (1983, p. 23):

“An individual's personal values and beliefs about what to look for when shopping for various products and services reflect that shopper's personality and may be determined by such personal traits as sex, age, race and *religion*” (emphasis added).

The social values component consists of family, friends, reference group and society at large. These social groups act as a source of information for individuals in the formation of either general or specific values, attitudes or behaviour. A religious group to which a person affiliated can also serve as a frame of reference for individuals. As Siguaw and Simpson (1997, p. 25) comment:

“Church affiliation can serve as a reference group and as a source of friends, allowing religion to comprise a significant portion of the social values factor as well as the personal values factor as noted by Sheth.”

Additionally, Sheth's theory speculates the possible effect of personal values (e.g. religion) on consumers' general predisposition towards the act of shopping (i.e. shopping orientations). In his words, Sheth (1983, p. 22-23) explains:

“In some ways, we might say that personal determinants are manifested in a customer’s shopping style, which be that an economic shopper, personalising shopper, ethical shopper or apathetic shopper (Stone, 1954). Alternatively, we might say that a customer is a convenience shopper, bargain shopper, compulsive shopper or store loyal shopper (Stephenson and Willet, 1969).”

Following the logic of Sheth’s theory, religion would appear to indirectly affect shopping predisposition along a path from personal determinants to shopping motives to choice calculus then to shopping predisposition (the evoked set of retail outlet alternatives). In addition to these, religion and religiosity may also have a direct influence by affecting acceptable shopping options or alternatives. Clark and Dawson (1996) note that “religiousness may impose limitations on the consideration of alternative actions. Certain potential actions may be unacceptable to the more religious, and therefore may not become a part of an evoked set of alternative actions” (p. 360-361). Thus, Sheth’s theory can be viewed as offering two potential avenues along which religious values may work to impact on shopping behaviour. First, an indirect path originating from religious impact on personal values; and secondly, a direct path originating from religious influences on the evoked set of retail outlet alternatives.

The aforementioned review serves a theoretical justification for examining religion as a segmentation variable in a retail patronage context. In the following section, the researcher presents the conceptual model adopted for this study. Each of the model constructs will be discussed within the context of the construct relationships as prescribed in the model.

3.2 Conceptual Model

The interrelationships of past theoretical and empirical efforts enable the researcher to propose a conceptual model of retail patronage behaviour, as diagrammed in Figure 3.8. The following sets of constructs were incorporated into the model due to their prevalence in the literature and their use in describing the basic process of store patronage behaviour: personal characteristics (religion, lifestyle and demographic), information sources, shopping orientation, store attribute importance and store patronage.

The theoretical foundation of this model draws a great deal from Shim and Kotsiopoulos' (1992a, 1992b) revised model of patronage behaviour and Sheth's (1983) Shopping Preference Theory. Shim and Kotsiopoulos' model is a revised version of retail patronage model originally developed by Darden (1980). The model is much simpler than the original one and therefore was used as a foundation in constructing the conceptual model for this study. The inclusion of religious construct into the model was based on Sheth's (1983) Shopping Preference Theory. Previous empirical evidence provides support for religion's effects on retail store patronage and other consumer behaviours (Hirschman 1983; Wilkes et al. 1986; McDaniel and Burnett 1990; Delener 1989, 1990a, 1994; Bailey and Sood 1993; Sood and Nasu 1995; Siguaw and Simpson 1997; Essoo and Dibb 2004).

Consistent with Sheth (1983), religious construct was treated as a personal characteristic factor, together with lifestyle and demographics. This is shown in the upper left portion of the model. These constructs are posited to influence information sources, shopping orientations, importance of store attributes and store patronage. The lower portion of the model presents relationships among information sources,

shopping orientations, importance of store attributes and store patronage. Through shopping orientations, information sources indirectly affected the importance of store attributes and patronage behaviour.

The following sections emphasize the consumer behaviour literature about retail patronage as it relates to each of the model constructs. However, it is to be noted that this review is not intended as a comprehensive overview of all patronage behaviour research. Rather, it provides a brief review of the research findings and highlights the potential of adding religious variables as predictors of shopping and patronage activities.

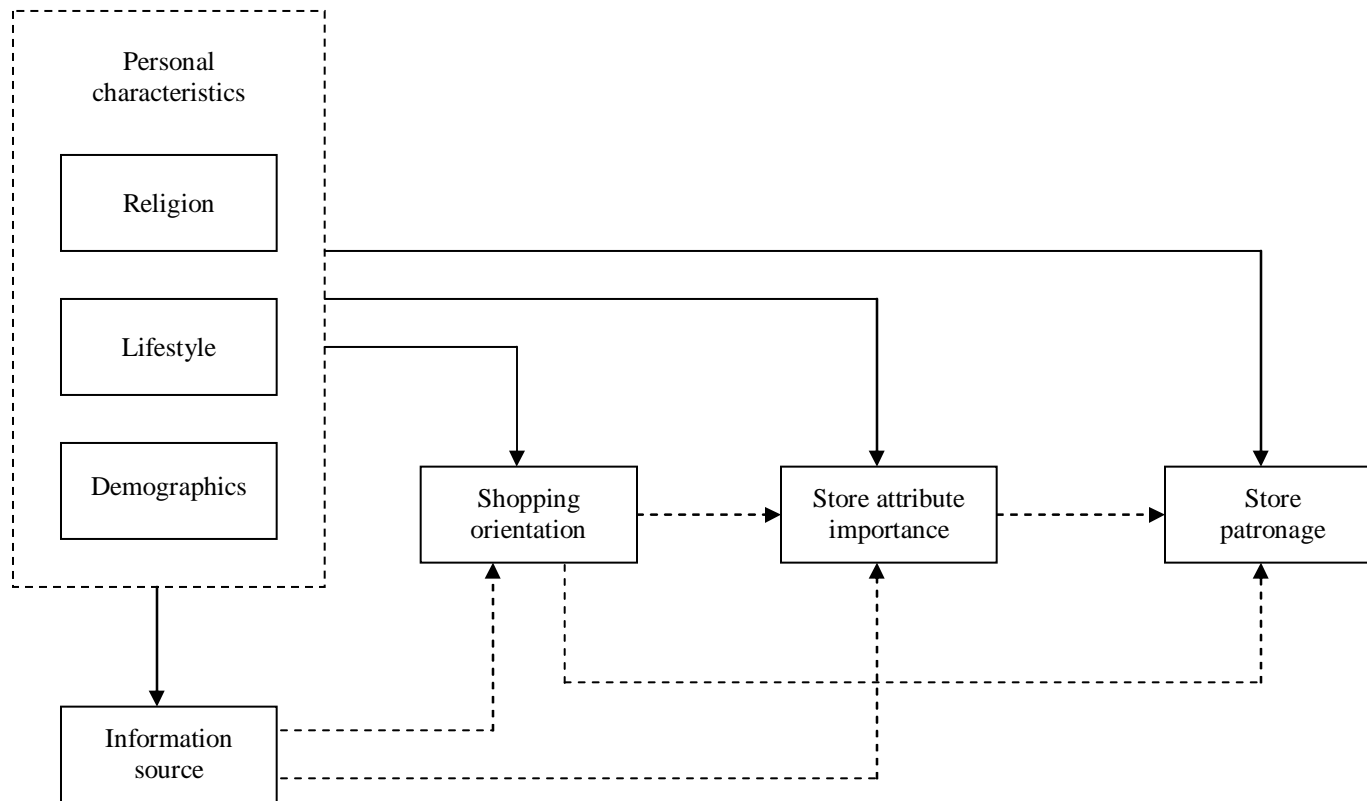


Figure 3.8 A conceptual model of the study

3.2.1 Personal Characteristics

There is a considerable amount of research about identifying and describing the effects of personal characteristics on consumer behaviour. Of specific interest here is the literature about religion, lifestyle and demographic associations with shopping and patronage activities.

3.2.1.1 Religion

Religion is widely accepted as an underlying determinant of human behaviour and a strong contributor to differences in belief and value systems. According to Zimbardo and Ruch (1979), religion affects our goals, decisions, motivations, purpose and satisfaction. In fact, it has been argued that religion plays an important role on how we live and experience life (Ellison and Cole 1982) and that it continues to be a key force in individual behaviour (LaBarbera 1987).

Foxall and Goldsmith (1994) contend that religious beliefs are interwoven with cognitive elements to form knowledge systems that justify and control attitude and behaviour. Evidence for links between religious beliefs and behaviour can be found in activities that form part of an individual's daily routines, as well as in those rituals that are rare and unique. Similarly, evidence for the influence of religious beliefs on behaviour is found in areas such as parental attachment, clothing styles, eating and drinking, the use of cosmetics, social and political views and sexual behaviour (Sheikh and Thomas 1994; Grigg 1995; Poulson et al. 1998; Mattila et al. 2001; Diamond 2002; Heiman et al. 2004). Clearly, the motives for participating in religious experiences are linked to religion.

In the consumer behaviour literature, religion has been studied from two main perspectives namely religious affiliation and religiosity (Essoo and Dibb 2004). Religious affiliation is the adherents of individuals to a particular religious group while religiosity, or religious commitment, is the degree to which beliefs in specific religious values and ideals are held and practised by an individual. A review of related literature presented in the previous chapter indicated that both of these dimensions appear to influence some aspects of consumer behaviour such as levels of perceived risk prior to purchase of cars and microwaves (Delener 1990a), the relative influence of husbands and wives in purchase decisions for major durables (Delener and Schiffman 1988; Delener 1994), levels of novelty seeking and communicating product information to others (Hirschman 1981; Hirschman 1982a), innovativeness (Hirschman 1981; Delener 1990b), reasons for engaging in leisure activities (Hirschman 1982c), hedonic consumption (Hirschman 1982d), perception towards advertising content (Mitchell and Al-Mossawi 1999; Fam et al. 2004), consumers' evaluation of service providers (Nix and Gibson 1989; Andaleeb 1993) and trust in electronic commerce (Siala et al. 2004).

In addition to these, studies show that religious convictions are manifested in various forms that affect consumer behaviour such as media usage and information search (Hirschman 1985; Delener 1989; McDaniel and Burnett 1991), shopping behaviour (Smith and Frankenberger 1991; Rodriguez 1993; Bailey and Sood 1993; Sood and Nasu 1995; Siguaw et al. 1995; Siguaw and Simpson 1997) and evaluation of retail store criteria (McDaniel and Burnett 1990; Clark 1992). Empirical evidences from these studies provided an ample theoretical ground for the researcher to

hypothesise that both religious affiliation and religiosity would be significantly related to certain aspects of retail patronage behaviour.

3.2.1.2 Lifestyle

Lifestyles are group specific forms of how individuals live and interpret their lives in a social context. Analyses of lifestyle address the unique patterns of living that influence and reflect consumer behaviour (Loudon and Della-Bitta 1993; Hawkins, Best and Coney 2001). Huddleston, Ford and Mahoney (1990) define lifestyle as “a way of living shaped by values and experiences” (p. 73). It described a composite of perceptible (activities, interests, demographics, social class and family orientation) and non-perceptible (needs, motives, values, personality, attitudes and opinions) variables that culminate in a person’s daily living (Visser, du Preez and du Toit 1996). The concept of lifestyle concerns the overt actions and behaviours of people because it relates more to the external characteristics of how a person lives. Lifestyle may be seen as an individual’s attempt to achieve their desired self-concept given the constraints of their real world (Mowen and Minor 1998). Thus even though people may come from the same subcultures, social class and occupation, they can have the different lifestyles.

Lifestyle reflects different modes of living and the patterns of consumption that tend to accompany them. In other words, it is a manifestation of one’s self-concept covering various issues including how one lives, what products one buys, how one uses them and one’s opinion about them (Osman 1993). A person’s lifestyle is also moulded by one’s demographic characteristics and personal values such as religious beliefs, sex and ethnicity. Thus an understanding of lifestyle characteristics

can help marketers to understand better their target markets by providing flesh to fill out the skeleton profiles provided by demographic variables. Elements of a consumer's lifestyle also enable marketers to identify market segments and create product and promotional mixes to target them.

Past researchers have found a link between lifestyle and shopping behaviour. Specifically, conceptual models show the influence of lifestyle on shopping orientations (Guiltinan and Monroe 1975; Darden 1980; Mason et al. 1983; Shim and Kotsiopulos 1992b; Osman 1993). Polonsky and Jarratt (1991) emphasised the importance of assessing consumer lifestyles relative to shopping orientation. In their study, four distinct groups of rural shoppers were identified: inactive, price, active and involved shoppers. Inactive shoppers lacked interest in gardening, hiking, camping, picnicking and do-it-yourself activities. Price conscious shoppers were older and slightly more active than the first group and preferred to shop nearby. Active shoppers paid less attention to price and comparison shopping and engaged in more recreational activities than the previous two groups. They paid the most attention to retail advertisements and enjoyed being outdoors, gardening and do-it-yourself activities.

Huddleston, Ford and Mahoney (1990) analysed the relationship between the importance placed on retail store attributes and lifestyle of mature female consumers. The results showed that certain lifestyle characteristics were related to the importance placed on store attributes: credit attributes, importance of quality and price attributes and age related attributes such as salespeople own age and delivery to home. Similarly, a psychographic study among the elderly by Oates, Shufeldt and Vaught (1996) found the significance of lifestyle as the primary determining factor in store attribute importance. The study revealed that lifestyle groups of elderly consumers

differed significantly when considering store and personnel quality such as fair prices, quality products and well-known brands.

3.2.1.3 Demographic Influences

Demographic variables such as gender, age, income and education attainment are frequently used for market segmentation purposes, primarily because these data are the most readily available and easy to measure among individual consumers (Pol 1991). In a study of consumer information acquisition, Schaninger and Sciglimpaglia (1981) found that older consumers and lower education consumers process less information and examine fewer attributes and alternatives. Kinley, Conrad and Brown (2000) found that younger male consumers rely more on personal information sources than do older adult male consumers.

Research also indicated that demographic variables are often associated with shopping orientations. Females have been found to be more aware of, and interested in, fashion than males (Haynes, Burts, Dukes and Cloud 1993) and they are “aspirational” shoppers who are interested in leisure and recreational shopping (Evans, Christiansen and Gill 1996). Males, on the other hand, tend to be brand loyal shoppers (Shim 1996). Research has also demonstrated different psychological characteristics between different age groups. For instance, younger consumers tend to be more fashion conscious, exhibit hedonistic/recreational shopping orientations (Wang et al. 2000) and less brand loyal (Wang et al. 2002).

In addition, researchers (Stone 1954; Gilbert and Warren 1995) have found that lower income earners are more economical and price conscious. Affluent consumers, on the other hand, are generally more quality and brand conscious. With

regard to education, Gehrt and Carter (1992) reported that people with lower education levels tend to have a recreational shopping orientation. They enjoy shopping in stores and shopping centres. Highly educated consumers, however, tend to look for high quality, brand-name products and make purchase from a variety of selections. Occupation is also related to education and level of income and is often linked to consumers' shopping orientation. White-collar workers are generally more fashion conscious (Gilbert and Warren 1995), quality conscious and brand loyal (Shim 1996) than blue-collar workers. It was found that white-collar workers tend to be more economical (Bellenger and Korgaonkar 1980; Evans et al. 1996). Similarly, Gehrt and Carter (1992) found that households with more professionals are recreational shoppers, while households with fewer professionals are convenience shoppers who are conscious of pricing.

Previous research has demonstrated that individual demographic characteristics may affect retail attribute importance. Hansen and Deutscher (1977-1978) found several differences between demographic segments with regard to store attribute importance. Their results indicate, for example, that older consumers and those with lower income and education levels tended to place more weight on store advertising and its policy on adjustments, whereas younger and better education consumers are more concerned about prices and convenience. A study by Semenik and Hansen (1976) indicated that low-income consumers tended to be more concerned with issues related to who shopped at the store and less concerned about store's selection of merchandise or fast checkout. Later, Hortman, Allaway, Mason and Rasp (1990) suggested that the demographic approach had a significantly higher prediction rate than other approaches for market segmentation. For example, the elderly placed

importance mainly on low prices, the atmosphere of the stores and the quality of merchandise and convenience.

Research also suggests that various demographic characteristics can directly predict store format choice (Zeithaml 1985; Arnold 1997; Stone 1998; Fox, Montgomery and Lodish 2004; Gehrt and Yan 2004). Williams, Painter and Nicholas (1978) found that married people tend to shop at medium priced retail stores. Research by Arnold (1997) and Stone (1998) provided empirical evidence that consumers who shop at large stores (e.g. warehouse clubs and supercenters) differed from non-shoppers in terms of age, education, household size, and income. In a study of consumer shopping and spending across retail formats, Fox et al. (2004) demonstrated that household size, income, and level of education influence consumers' store format choices. Similarly, Gehrt and Yan (2004) found gender and education to be predictive of store format choice. However, age and income were found to be non-significant. In a more recent study, Carpenter and Moore (2005) examine store patronage behaviour among consumers in the Senior, Baby Boomer, Generation X and Generation Y cohort groups. For the purchase of apparel, the researchers found that the senior cohort expressed a strong preference for the upscale department store format as compared to the other cohorts. Baby Boomers expressed a stronger preference for catalogues as compared to other cohorts while Generations X and Y respondents expressed a strong preference for specialty stores.

3.2.2 Information Sources

In the consumer behaviour literature, consumer information sources are generally discussed within the context of consumer search behaviour (Loudon and Della Bitta

1993; Mowen and Minor 1998). The literature suggests that information which consumers need in order to assess the alternatives that are available in the market can be obtained on two levels, namely internal and external search. The former involves the initial search being carried out by the individual, often subconsciously, drawing on past experiences and learning structures. Depending upon the type of problem encountered, the degree of internal search may vary (Mowen and Minor 1998). If the purchase process involves extensive problem solving, consumers may actively search in the long-term memory for information on brand or store alternatives. For low-involvement purchase processes, internal search tends to be highly limited. If the result of internal search is not sufficient for decision-making purposes, then the consumer moves onto the second level, making use of external information sources.

External sources refer to the acquisition of information from outside sources, such as advertisements, sales personnel and retail displays. When the need for information arises, consumers can gain information from three major areas: marketing sources, personal sources and neutral sources. Marketing sources are the entire package of marketing tools that a marketer uses to communicate product information. These sources include the product itself, packaging, salespeople, display, promotion, advertising and other sources under the control of the marketers (Hawkins, Best and Coney 2001). Personal sources include all forms of interpersonal communication covering products not under the control of marketers. In one's daily interaction with people, various aspects about products are communicated and exchanged. These sources include family influence, friend's recommendation, word-of-mouth communication and personal observation (Tan and Dolich 1983). Neutral sources include a portion of the mass media, government reports, consumer oriented reports

and publication from independent product-testing agencies. They are independent assessments of the products and often provide objective evaluations of product characteristics. These sources are typically not directly influenced by either marketers or buyers (Loudon and Della Bitta 1993).

From a managerial perspective, knowledge of consumers' usage of informational sources enables the marketer to target the prospective consumer and to predict media usage (Visser and Du Preez 1998). Consumers differ with regard to their information search patterns, the media they use and stage in the decision-making process at which they use specific media and information sources. According to the model used in this study, information sources directly assisted in the explanation of shopping orientations, the importance of store attributes and store patronage.

In previous research, personal characteristics such as religious affiliation and religiosity have been shown to influence information-searching and media usage patterns. Delener (1989) found that religious affiliation and religiosity influence external information search and media usage for microwave oven and automobile. In another study, it was found that evangelical (born-again) and non-evangelical consumers in the U.S. demonstrated some differences in their major media habits (McDaniel and Burnett 1991).

3.2.3 Shopping Orientation

Shopping orientation is one of the most axiomatic concepts in consumer behaviour literature which has been widely used to classify consumers based on their shopping habits and styles. Understanding the target market's shopping orientation has a significant impact on a retailer's success. This is because shopping orientation is

regarded as the most influential factor that directly affect patronage choice (Hawkins et al. 2001) or indirectly through consumers' evaluation of relevant attribute of store alternatives, which then become the basis for their store choice (Home 2002). Thus, in order for retailers to maximise customer satisfaction and retail sales, they must understand consumers' shopping orientations that are unique in shopping attributes and patronage behaviour.

Past researchers have reached a consensus agreement that shopping orientation is a multi-dimensional concept that reflects a consumer's view of shopping as a social, recreational or economic phenomenon, as well as individual's motivations for shopping (Shim and Mahoney 1992; Hawkins et al. 2001). The basic premise of this concept is that people take many different approaches to the act of shopping based on their past shopping experiences and personal-value systems (Darden and Dorsch 1990). Thus, shopping orientations can be thought of as characterising an individual's general predisposition toward acts of shopping. It is a specific attitude structure about shopping as a special activity and also refers to shopping lifestyle or consumer decision-making styles which has cognitive and affective characteristics (Sproles and Kendall 1986; Laaksonen 1993). Shopping orientations are usually analysed by using factor analytic techniques to identify latent patterns among subjects' responses to statements related to activities, interests and opinions (AIO) and interpreted by summarising the individual statements that load on each orientation.

A variety of definitions have been used to explain this market segmentation tool. Moschis (1992) defined shopping orientation as "mental states that result in various general shopping patterns" (p. 374). This includes consumer "activities, interests and opinions concerning the shopping process" (Moschis 1992, p. 231). Shim

and Kotsiopoulos (1993) define shopping orientations as categories of shopper styles with particular emphasis on certain activities. They note that shopping orientations also represents consumers' needs for products and services. Visser and du Preez (2001) suggest that the concept of shopping orientation consists of a personal dimension (e.g. activities, interests, opinions, motives, needs and preferences) and a market behaviour dimension reflects the personal dimension and indicates needs and preferences for, inter alia, information sources, stores per se (patronage behaviour) and store image (including store attributes).

Scholarly research into shopping orientation began in the mid-1950s with some early pioneers in patronage behaviour research who attempted to explain shopping behaviour in terms of social-psychological concepts. Utilisation of these concepts resulted in a number of studies treating shopping behaviour as being unaffected by physical space, contrary to the early views of patronage behaviour from an economic-geographic perspective. Stone (1954) is the first researcher who pioneered the research on shopping orientation. In his seminal article, Stone suggests that as consumers gain experience in the marketplace, a fractionisation of shopping orientation evolves. Stone interviewed 150 housewives in Chicago to determine their orientations towards shopping with local department merchants and large chain department stores. Stone categorised responses based on the question "why would you rather do business with local independent merchants or large chain stores?" (p. 38).

His grouping resulted in four categories of shoppers:

Economic shoppers (35%): people who are primary inclined to achieve efficiency in shopping. They judge a store on the basis of objective criteria such as price, quality and merchandise assortment as opposed to store personality or convenience. Economic shoppers are likely to be motivated by learning about new trends, need satisfaction effectively and need satisfaction in a faster manner.

Personalising shoppers (29%): people who need social contact. They form very strong personal attachments to store employees, and as a result, they prefer stores that are more intimate. These shoppers are motivated by social experience, diversion and self-gratification motives, among others.

Ethical shoppers (18%): people who are motivated by normative criteria regarding taking care of local small business. They are willing to behave consistently with moralistic beliefs such as “helping the little retailer” or “avoiding the chain store ... [with] ... no heart or soul” (Stone 1954, p. 40). These shoppers may be motivated by social experience and self-gratification motives, among others.

Apathetic shoppers (18%): people who do not like to shop. Consequently, they do not like to establish personal relations with store personnel. They like to minimise the trouble of shopping by favouring convenience. These consumers may be motivated by need satisfaction effectively and need satisfaction in a faster manner, and particularly need satisfaction with minimum amount of interaction with these store personnel.

Since Stone’s seminal work, numerous empirical studies have been conducted and many of these studies have attempted to develop typologies by using various products and consumer groups. Stephenson and Willett (1969) developed a four-way topology for six product categories. Consumers were classified into store-loyal, compulsive and recreational, convenience and price-bargain shoppers based on shopping processes. Darden and Ashton (1971) confirmed Stone’s propositions of shopper types for health and personal care products. William et al. (1978) classified grocery shoppers into apathetic, convenience, price or involved shoppers and found significant differences across groups in demographics and media usage. Lumpkin (1985) identified three groups of elderly shoppers (65 years and older) in general shopping orientations: active, economic and apathetic shoppers. Lumpkin et al. (1986) examined rural consumers in relation to outshopping orientations and identified three types of shoppers: inactive, in-shoppers, active out-shoppers and thrifty innovators. Other researchers have incorporated psychographics into shopping orientations and

identified additional shopper types such as social shopper, quality shopper, problem-solving shopper, psycho-socialising shopper and brand-name shopper (Darden and Reynolds 1971; Darden and Ashton 1974-75; Moschis 1976; Howell 1979). Shopping orientations were further examined in relation to product usage rate, consumer information usage, in-home and outshopping, electronic shopping, lifestyle and self-concept, socialisation effects of work experiences and store patronage (Darden and Reynolds 1971; Moschis 1976; Lumpkin et al. 1985; Darden and Howell 1987; Gehrt and Shim 1998; Vijayasathy 2003; Shamdasani et al. 2001; Moye and Kincade 2003). Table 3.1 presents some selected studies of consumer behaviour on shopping orientations.

Additionally, some researchers focused on profiling characteristics of a particular shopper style rather than grouping consumers. For instance, recreational shoppers were characterised as enjoying shopping leisurely and using information actively, while convenience-economic shoppers disliked or were neutral towards shopping (Bellenger and Korgaonkar 1980; Bellenger, Robertson and Greenberg 1977; Korgaonkar 1981). Shim and Kotsiopoulos (1993) reported significant differences across the shopper groups in using information sources, the perceived importance of store attributes and lifestyles. Highly involved clothing shoppers, for example, tended to place importance on such store attributes as the personnel, visual image of store, customer service, ease of access and brand/fashion, and they shopped more at specialty stores and department stores than the other types of shoppers. The convenience-oriented catalogue shoppers put primary importance on easy access and were more likely to shop at specialty stores and through catalogues. The apathetic shoppers were least likely to place importance on store attributes and tended to shop at

discount stores. Based on these findings, the researchers concluded that shopping orientations are a base for segmenting female apparel shoppers and these groups were unique in consumer buying characteristics such as the usage of informational sources, perceived importance of store attributes, lifestyle activities and store patronage.

A number of studies have been conducted to examine the influence of personal characteristics on aspects related to shopping orientations. Noteworthy among the efforts are three studies that attempted to relate religion to shopping behaviour. Bailey and Sood (1993) reported that consumer of different religious affiliations have differences in shopping behaviour. Sood and Nasu (1995) provided some evidence that a person's religiosity influences his or her behaviour. Among others, they found that devout Protestants were more concerned with prices, considering products from other countries and patronizing retail stores than non-devout Protestants. More recently, a study by Essoo and Dibb (2004) showed that there are significant differences among Hindus, Muslims and Catholics in Mauritius with regards to their shopping behaviours.

Table 3.1 Selected consumer behaviour research on shopping orientations

Researcher(s)	Sample	Context	Shopper Segments/Clusters
Shim and Mahoney (1991)	Videotex subscribers (<i>N</i> = 132)	In-home electronic shopping	1 Conservative/worried 2 Comparative/user-friendly 3 Recreational/innovative
Gehrt and Carter (1992)	Canadian consumers (<i>N</i> = 297)	Catalogue shopping	1 Catalogue convenience 2 Store recreational 3 Catalogue recreational 4 Merchandise intensive 5 Impulse
Gehrt, Alpander and Lawson (1992)	French consumers (<i>N</i> = 566)	Catalogue shopping	1 Catalogue recreational 2 Store recreational 3 Investigative shopper 4 Aesthetic shopper 5 Quality shopper 6 Returns shopper 7 Relationship shopper 8 Catalogue convenience
Shim and Kotsiopulos (1993)	Female apparel shoppers (<i>N</i> = 482)	Apparel shopping	1 Highly involved 2 Apathetic 3 Convenience-oriented catalogue
Gehrt and Shim (1998)	French consumers (<i>N</i> = 566)	Catalogue shopping	1 Catalogue orientation 2 Store orientation 3 Aesthetic orientation 4 Merchandise intensive 5 Return concerned orientation
Shim, Gehrt and Holikova (1998)	Female shoppers (<i>N</i> = 439)	Grocery shopping	1 Price conscious 2 Recreational 3 Food safety 4 Health/nutrition 5 Convenience/time conscious 6 Home shopping 7 Home cooking
Kenson (1999)	Male apparel shoppers (<i>N</i> = 146)	Apparel shopping	1 Apparel outshoppers 2 Apathetic 3 Value shoppers 4 Highly involved
Brown, Pope and Voges (2003)	Internet users (<i>N</i> = 437)	Online shopping	1 Personalising 2 Recreational 3 Economic 4 Community-oriented 5 Convenience 6 Involved 7 Apathetic

3.2.4 Importance of Store Attributes

Store image, as one of the determinants of store choice, is largely based on store attributes, which can gain a selective advantage for retailers in the minds of consumers. Coupled with such consumer characteristics as shopping orientation, store attributes help retailers to predict which shopping outlets people will prefer (Darden and Babin 1994). The concept was first introduced by Martineau (1958) who described store image as “the way in which the store is defined in the shopper’s mind, partly by its functional qualities and partly by an aura of the psychological attributes” (p. 47). In Martineau’s (1958) words, “regardless of the ability to pay, all shoppers seek stores whose total image is acceptable and appealing to them individually” (p. 49). Accordingly, Martineau’s seminal paper on ‘store personality’ has triggered interest for other researchers to involve in store image studies. A special issue of the *Journal of Retailing* (volume 50, no. 4 1974 -1975) was devoted exclusively to store image research.

In their effort to understand how consumers make store choice decisions given a set of store attribute preferences, researchers have emphasised the extent to which consumer attaches “importance” to attributes of individual stores. This interest is grounded in the traditional multi-attribute model set forth by Fishbein and Ajzen (1975) depicting the relationship between belief, attitudes and behaviour. They posit that a person’s attitude toward a given object is a summation of beliefs about the object’s attributes weighted by the evaluation of the importance of these attributes. Within this model, beliefs involve perceptions of the object’s attributes. In addition to beliefs about an object’s attributes, this model accounts for the importance assigned to

an attribute. Thus, attitude can vary substantially by how important attributes are to a consumer.

Applied to the retail situation, the multi-attribute model indicates that a consumer's attitude toward a retail store is a function of (a) the degree of importance attached by the consumer to various store attributes, and (b) the consumer's perception of the degree to which a retail store possesses each attribute. According to Moye (2000), consumers engage in a comparison process in their minds to determine whether their evaluation of the relative importance of store attributes aligns with their perceptions of these attributes. If the two factors match, then the consumer chooses the store. Engel et al. (1995) also suggest that the consumer compares the importance of store attributes with the store image (i.e. overall perception) to determine acceptable and unacceptable stores. If consumers' perceptions of the store attributes are positive, then they may decide to purchase from the store. On the other hand, if consumers' perceptions of the store attributes are negative, then they are unlikely to shop in the store.

The interaction between store attribute importance judgments, image formation and store patronage may be well understood from the following example. Customer A views certain store attributes as important, while customer B prioritises other attributes. Overall, the evaluation of attributes of a store can be similar between customer A and customer B but the hierarchical ordering of these attributes gives rise to different perceptions of the store or store image. Customer A for example, regards price level and degree of selection as important criteria in selecting a store in which to shop. Hence, customer A has a preference for store X because he or she perceives store X as having these qualities. Here, the customer's evaluation of store X is that of

a store which offers a wide range of merchandise selection coupled with reasonable prices. On the other hand, customer B places quality of merchandise and reputation for fashion as important and regard prices as less important criteria. Thus, customer B is unlikely to shop at store X but instead shop at store Y because he or she considers store Y as a store which offers high quality fashionable merchandise. As long as stores X and Y maintain their unique features as perceived by these customers, customers A and B will continue their patronage respectively.

Researchers have identified a diverse set of store attributes that consumers consider when patronising a retail store. Hasty and Reardon (1997) listed eleven dimensions of store attributes affecting image formation and patronage behaviour. These are: (1) exterior design, (2) location, (3) prices, (4) layout, (5) visual merchandising, (6) promotion, (7) interior design, (8) advertising, (9) personal selling, (10) services and (11) merchandise.

Store attributes are evaluative criteria consumers have toward the store. Accordingly, the importance of various store attributes varies by store types. An early study by Hansen and Deutscher (1977-1978) investigated the relationship between store attributes and patronage behaviour and found that the importance of different attributes affected consumers' retail store selection. A similar finding by Woodside and Trappey III (1996) suggested that the evaluation of relative attributes affects the consumers' decision to shop at a particular store. In the context of grocery shopping, it was concluded that store price format affected consumers' store choice (Bell and Lattin 1998). Consumers would determine which store to go to based on the pricing strategy of the store and the size of their expected expenditure. For example, shoppers who intended to make large expenditures preferred "everyday low prices" while small

expenditure shoppers were more responsive to price strategies that offered temporary deep discounts in certain product categories.

In an effort to determine how consumers organise their shopping trips when faced with an increasingly enlarged set of retail formats, Popkowski-Leszczyc and Timmermans (2001) found that consumers tended to choose a variety of stores and overall preferred to shop at specialty stores. Furthermore, consumers were increasingly likely to select a single store when prices were lower, parking costs were less, better assortments were offered, travel time was reduced and checkout lanes were shorter. Lee and Johnson (1997) found that customer expectations of store attributes also differ according to store type. They observed that customers did not expect much customer service at discount stores while they expected extensive service from specialty stores. A study by Cassill et al. (1993) found that consumers chose to patronise individual department stores for clothing purchases when a combination of factors was present: the stocking of particular brands; the presence of national and own-branded products; and where garments offered functional value rather than fashion appeal. Recently, Paulins and Geistfeld (2003) showed that apparel store preference is affected by type of clothing desired in stock, outside store preference, shopping hours and store advertising. Accordingly, consumers' perceptions of store attributes were found varied by store type.

Arnold, Handerman and Tigert (1996) surveyed low-priced department store shoppers in five different cities in the US and Canada. They found that a store which was identified as being the best on the performative attributes such as locational convenience, price and assortment of merchandise was more likely to be patronised by customers. The study also revealed that a store identified as having a strong

community reputation not only directly affected store choice, but also moderated the effect of location, price and assortment attributes. A study in the Malaysian context by Jantan and Kamaruddin (1999) found support for the importance of store attributes in determining consumers' choice decision of superstore and supermarkets. Out of seven attributes of store image, location, merchandise, price and service emerged as the most salient attributes, having a better bearing to determine store patronage. At its heart, the findings suggest that location and service have a strong influence on consumers' store choice.

Despite the obvious importance of detecting store attributes that influences consumer decisions, related research suggests that the perceived importance of specific store attributes may be partially determined by the personal characteristics of the consumers. This may lead to heterogeneous preferences that vary over people with different characteristic profiles. Apart from other personal characteristics such as lifestyle activities and demographics such as age, income, gender, occupation and education attainment, research indicates that religion appears to influence some aspects of retail store evaluative criteria. McDaniel and Burnett (1990) examined the effects of multiple measures of religiousness (labelled religious commitment and religious affiliation) on selected retail store evaluative factors. They found a positive relationship between high self-perceived religiousness (the cognitive component of religious commitment) and the desire for shopping efficiency, sales personnel friendliness/assistance and product quality in a retail store. In addition, religious contribution (the behavioural component of religious commitment) was positively and significantly associated with sales personnel friendliness/assistance and credit availability.

3.2.5 Store Patronage

In the assimilation of retail patronage literature, the lack of an operational definition of patronage behaviour was evident. Several researchers defined patronage behaviour as the store choice of a consumer based on a set of evaluative criteria. Other researchers provided the definition that patronage behaviour was defined as store loyalty to a specific store.

Spiggle and Sewall (1987) outlined three different levels of retail selection behaviour: retail preference, retail choice and retail patronage. Retail preference is a condition where a customer may give positive statements about a particular store. However, this does not necessarily mean that the customer will choose that store for a specific purchase from a given store usually after some information search and the evaluation of alternative stores. This specific purchase task may or may not be repeated for the next purchase. If a customer's purchase pattern is repeated over a series of purchase tasks, then this behaviour is called patronage. In other words, the customers' repeated purchase pattern at a particular retail store may develop into some kind of loyalty behaviour towards that store. According to Spiggle and Sewall (1987, p. 98):

“Patronage refers to a consumer's purchase pattern over a series of purchase tasks. Retail patronage patterns may result from loyalty based on their commitment and strong preference or from low consumer involvement whereby habit or variety seeking dictate patronage patterns. Retail patronage is not a binary outcome; a consumer may spend 75% of expenditures at store X and the other 25% elsewhere.”

Numerous studies have been conducted to explain patronage behaviour patterns for a variety of consumer types. Research showed that store patronage is influenced by various factors including store attributes, information source, shopping

orientation and consumers' personal characteristics such as demographics and lifestyles. While no research has investigated the influence of religious factors on store patronage, McDaniel and Burnett (1990) suggest that religiosity might help in explaining patronage at different types of stores.

3.3 Hypotheses

Based on the foregoing literature review and the model in Figure 3.8, three research hypotheses were constructed for this study.

3.3.1 Religious Affiliation

Based upon the previous discussion of the major beliefs and practices of the four religions (presented in Chapter 4), it would seem likely that people affiliated with different religions would have quite different consumer behaviours. If there are wide variations in the behaviours of consumers affiliated with different religions, then affiliated religions should be an important construct in the study of consumer behaviour. The following hypotheses were proposed:

H1a: There are significant differences in lifestyle among consumers affiliated with different religions.

H1b: There are significant differences in use of information source among consumers affiliated with different religions.

H1c: There are significant differences in shopping orientation among consumers affiliated with different religions.

H1d: There are significant differences in perceived importance of store attributes among consumers affiliated with different religions.

H1e: There are significant differences in store patronage among consumers affiliated with different religions.

3.3.2 Religiosity

Similarly, based on the results of previous studies, it was expected that a consumer's religiosity, or the degree to which beliefs in specific religious values and ideals are held and practiced by an individual, appear to influence aspects of patronage behaviour. Thus, the second set of hypothesis was that:

H2a: There are significant differences in lifestyle among consumers with different levels of religiosity.

H2b: There are significant differences in use of information source among consumers with different levels of religiosity.

H2c: There are significant differences in shopping orientation among consumers with different levels of religiosity.

H2d: There are significant differences in perceived importance of store attributes among consumers with different levels of religiosity.

H2e: There are significant differences in store patronage among consumers with different levels of religiosity.

3.3.3 Prediction of Patronage Behaviour

Finally, it was expected that religious affiliation and religiosity would be shown to be the important predictors of patronage activities in the presence of other personal characteristic variables such as lifestyles and demographics. Thus, the third set of hypothesis was proposed:

- H3a: Holding all other predictors constant, there is a significant relationship between religious affiliation and use of information sources.
- H3b: Holding all other predictors constant, there is a significant relationship between religious affiliation and shopping orientation.
- H3c: Holding all other predictors constant, there is a significant relationship between religious affiliation and perceived importance of store attributes.
- H3d: Holding all other predictors constant, there is a significant relationship between religious affiliation and store patronage.
- H4a: Holding all other predictors constant, there is a significant relationship between consumer religiosity and use of information source.
- H4b: Holding all other predictors constant, there is a significant relationship between consumer religiosity and shopping orientation.
- H4c: Holding all other predictors constant, there is a significant relationship between consumer religiosity and perceived importance of store attributes.
- H4d: Holding all other predictors constant, there is a significant relationship between consumer religiosity and store patronage.

3.4 Summary

This chapter has presented a review of relevant literature on consumers' retail patronage behaviour. Previously proposed models of retail patronage were reviewed and summarised to introduce a conceptual framework of this study. Two existing models, namely Darden's (1980) patronage model of consumer behaviour and Sheth's (1983) shopping preference theory, served as the theoretical foundation for the development of the conceptual model. Information sources, shopping orientation,

importance of store attributes and store patronage were the specific retail patronage aspects hypothesized to be influenced by religious variables. However, many other variables can also be identified and investigated. The following chapter presents the Malaysian cultural context within which this study was carried out.

CHAPTER 4

MALAYSIA AS A SETTING FOR THE STUDY

4.0 Introduction

Effective marketing strategies begin with understanding the characteristics of the target audience. With this view in mind, this chapter is devoted to provide background information on the Malaysian environment as a setting for this study. It covers topics that are relevant to understanding the current state of Malaysian consumers, which are fundamentally different from that found in the West. Apart from the fact that the researcher is from Malaysia, there are indeed a number of reasons why this country is thought of as an appropriate setting for this study. These are explained in the following paragraphs.

It has been argued that most studies on consumer behaviour are done in the American or European context where theories and models of consumption are proposed as general laws of behaviour (Lee and Green 1991; Durvasula et al. 1993; McCort and Malhotra 1993). Prominent consumer behaviour models such as that of Engel, Kollat and Blackwell (Engel et al. 1995) have been questioned recently because of their reliance on Anglo consumers for formulating stage theories of consumer buyer behaviour. The model and literature largely tends to ignore fundamental cross-cultural differences in motivation and consumer decision-making processes. Such research may be inapplicable to other cultures as these theories are culturally bound to a Western conceptualisation of the world and might cause serious problems when the concept is tested in a different cultural setting (McDonald 1995).

More critically, the Western focus of most of consumer behaviour research raises questions as to the transportability of its findings to non-Western markets such as Malaysia. Thus, in order to achieve a perspective on consumer behaviour, there is a need to conduct research in specific cultural settings so that similarities and differences among cultures can be compared. In addition, conducting consumer research in a specific setting can significantly contribute to our knowledge of global consumer behaviour. If we expect global consumer research and theory to become an emerging area of consumer behaviour, it is important for researchers and marketing practitioners to understand and cope with cross-cultural consumer behaviour (Engel 1985; Luna and Gupta 2001). To this end, Malaysia has been selected as a setting for the present study as a rich set of distinctive cultures exists. The unique cultural composition and diversity of the Malaysian consumer population makes cultural specific research within the country's domestic market a necessity.

In an Asian context, and even in an international context, Malaysia is unique. The outstanding characteristic of Malaysia is its highly variegated ethnic mix which makes it one of the classic examples of a multicultural society in the world (Ooi 1999). Among examples of plural societies, Malaysia shows an unusually balanced ethnic structure of two dominant groups, the indigenous who make up 65.1% and the Chinese who make up 26%. As well there are 7.7% Malaysians of Indian ethnic origin. Due to the cultural differences that exist in the origins of different communities, there is a noticeable absence of homogeneity in the behaviour of consumers in Malaysia where the nature of its domestic market is highly characterised by the "ethnically segmented consumer markets" (Mohd. Salleh, Teo and Pecotich 1998, p. 481). Muslims, Buddhists, Hindus and Christians, which make up 95% of the

total population, have gradually become the most prominent consumer segments in Malaysia that determine some specific lifestyle and consumption habits. Such unique characteristic provides a particularly appropriate context for the present study from which a sample representing the world's major religions can be drawn from its population.

The landscape of the global economy has changed dramatically as Southeast Asia and other regions have taken an expanded role. Recent widespread economic in stability sparked by concerns about the purchasing power of Southeast Asian consumers illustrates the extent to which some of these once-small markets such as Malaysia have become important players (Briley and Williams 1998). Unlike some other Asian countries, the “consumer revolution” in Malaysia has already forged ahead in tandem with the country's rapid economic growth. At the same time, Malaysia has a substantial middleclass and many of its rapidly urbanising population are ready consumers. In 1995, the latest figure for which figures are available, the middle income group in Malaysia (earning between RM1000 to RM3000 per month), comprised 47 percent of households (Rice and Mahmoud 1999). According to the Seventh Malaysia Plan 1996-1997, the middle income group is expected to increase in size and achieve growth in household income. Malaysia's average yearly household income was US\$8,900 in 2001, compared to US\$5,217 in 1990 (Salih and Colyer 2000). The number of affluent households, defined as those households earning more than US\$15,000 per year, is rising. In 2001, for example, the affluent were 13.4% of all Malaysian households and accounted for 41% of all household expenditures. By 2006, it is projected that the percentage of affluent Malaysian households will be 17.7%, making up 48.2% of all household expenditures (Asian Demographics 2002).

Finally, although in Malaysia there has been an abundance of research on consumer behaviour, there is a dearth of published research on religion and its relationship to aspects of consumer behaviour. An exhaustive review of the pertinent literature as presented in Chapter Two revealed that most of previous studies on this topic have been conducted on religious groups like the Jews, the Protestants and the Catholics in the United States due to the strong economic impact they have created (e.g. Delener 1987, 1989, 1990a, 1990b, 1994; Delener and Schiffman 1988; McDaniel and Burnett 1990, 1991; LaBarbera and Gurhan 1997). It is believed that religious groups in Malaysia may also have certain distinctive characteristics in terms of consumer behaviour that could be of equal interest to both researchers and marketing practitioners. This study is therefore conducted with an aim to narrow the current knowledge gap by extending the number of religious beliefs for analysis to include Islam, Buddhism, Hinduism and Christianity in Malaysia.

This chapter is arranged in the following sequence. The discussion starts with an overview of Malaysia, followed briefly by the country's historical background, political system and economic development. The demographic factors are then examined. Next, the chapter discusses selected aspects of consumer behaviour including income and buying power, patterns of lifestyle and leisure activities. The next section describes the cultural environment as a stable multicultural society, with Malay, Chinese and Indians as the main ethnic groups, each with their distinct languages, religions and customs. One major aspect examined here are the main tenets of the country's four main religious groups namely Muslims, Buddhists, Hindus and Christians. A concluding section summarises the key points discussed.

4.1 An Overview

Before discussing the historical background and political system of Malaysia, it is advisable to understand some general profiles of the country. This section provides an overview of Malaysia, with regards to its physical environment, climate, government and population.

Malaysia is a tropical country located right in the heart of South-East Asia. It covers a total land area of 331,000 square kilometres, made up of 132,000 square kilometres in Peninsular Malaysia (formerly known as Malaya) and 199,000 square kilometres in Sabah and Sarawak (East Malaysia). Although East Malaysia occupies the larger portion of Malaysia's total area, it is primarily comprised of undeveloped land and jungles. Approximately 80 percent of the nation's total population occupy the main peninsula while the remainder divide about equally between Sabah and Sarawak.

Peninsular Malaysia on the Asian mainland shares a common border with Thailand to the north; the Straits of Malacca separate the peninsula from Sumatra to the west and the Tebrau Straits from Singapore to the south. The South China Sea separates Peninsular Malaysia from the East Malaysian states of Sabah and Sarawak by about 720 kilometres of the South China Sea (Information Malaysia 2000). Both Sabah and Sarawak share their southern borders with the Indonesian province of Kalimantan. Perched on the north-eastern coast of Sarawak is Brunei Darussalam. The Federal Territory of Labuan Island (formerly part of Sabah until April 16, 1984) is off the south-western coast of Sabah. A map of Malaysia is provided in Figure 4.1.



Figure 4.1 Map of Malaysia

Malaysia has an equatorial climate with high temperatures coupled with copious rain during all seasons. This is mainly due to maritime influences. The relative humidity averages 80% year round and temperatures vary between 22°C and 33°C (Mohd. Salleh et al. 1998). Winds are generally light and variable. Situated at the equatorial doldrums, it is extremely rare in Malaysia to have a full day with a complete clear sky. On the other hand it is extremely rare to experience a few days without any sunshine except during the northeast monsoon occurring during the months of November to March. Malaysia is endowed with rich natural-resources and is often referred to as a “Garden of Eden” (Salleh et al. 1998). Of the total land area, about 77 percent is occupied by forest, the bulk of which is commercially exploitable timber, while most of the remaining land area is cultivated. Because of its topography and climate, Malaysia also possesses considerable water resources and fairly extensive mineral resources and this include both metallic such as tin, iron, ore, bauxite and copper and non-metallic resources including petroleum, natural gas, limestone and marble.

Malaysia is a federation of thirteen states and the Federal Territories of Kuala Lumpur, Putrajaya and Labuan Island. Nine of the states are Malay sultanates namely Perlis, Kedah, Kelantan, Terengganu, Pahang, Perak, Selangor, Negeri Sembilan and Johor while each of Penang, Malacca, Sabah and Sarawak has a Yang di-Pertua Negeri (governor). Kuala Lumpur city is the national capital of Malaysia while Putrajaya (formerly part of Selangor) is the new administrative centre of the Federal Government replacing Kuala Lumpur, which officially declared as the third Federal Territory in February 1, 2001.

Each state in Malaysia has its own written state-level constitution, a legislative assembly and a government headed by a Menteri Besar (Chief Minister). Malaysia's head of state is the Yang di-Pertuan Agong (King of Malaysia) as the paramount ruler who is selected for five years terms from among nine sultans of the Peninsula Malaysian states. The King has ceremonial duties and is also the leader of the Islamic faith, the official religion of Malaysia.

The head of government is the Prime Minister who is appointed by the King. The cabinet members are appointed by the Prime Minister from among the parliament which consists of the Senate and the House of Representatives. Among the 69 members of the Senate who serve a six-year term, 43 are appointed by the King and 26 senators are elected by the state of legislature, that is, two from each state. The 193 members for the House of Representatives are elected from single-member districts by universal adult suffrage to maximum terms of five years. Of these, 145 are from Peninsular Malaysia, 21 are from Sabah and 27 are from Sarawak. Legislative power is divided between federal and state assemblies (Information Malaysia 2000).

Malaysia is a multi-racial country with diverse ethnic, cultural and religious backgrounds living in harmony. The main racial groups in Malaysia are Malays, Chinese and Indians and a very diverse group of indigenous people in Sabah and Sarawak. Malay is the national language but Mandarin, Tamil, English and other ethnic languages are widely spoken. Islam is the official religion of Malaysia but it is not an Islamic state in the true sense of the term and has remained committed to freedom of religion. Religion is paramount in the running of the nation, yet it has a unique cultural mosaic; about half the population are non-Muslims who are mostly second generation immigrants. For such characteristic, Malaysia has been categorised

with countries like Lebanon and Nigeria. This is due to the ethnic and religious differences existing within one nation state (Lawrence 1998). Like Indonesia, Malaysia has avoided the excesses of Islamic extremism evident in parts of the Middle East (Sheridan 1994).

4.2 Brief Historical Background

In order to understand consumer behaviour in Malaysia, it is helpful to firstly consider the historical development of the country, as many of the trends evidenced today have their origins in the past.

The course of Malaysian history and of its people has been largely determined by its continual interaction with foreign powers and influences because of its strategic position at one of the world's major crossroads, its tropical climate, the surrounding environment and the regime of the northeast and southwest monsoon. Peninsular Malaysia was flanked by "one of the oldest and most frequented maritime highways of the world" (Demaine 1997, p. 565). Its position between the Indian Ocean and the South China Sea made the country a natural meeting place for traders from the east and the west.

The Malay Peninsula (Peninsular Malaysia) has since the first century BC been the focus of attention from neighbouring areas: the two major civilisations of the Indian subcontinent to the west and China to the east. Frequent trading contacts with China and the subcontinent of India have been responsible for the waves of outside influence. It was during this time when Hinduism and Buddhism had a great impact on the culture, language and social customs of the region. Subsequently there emerged Indianised kingdoms in the Malay Peninsula and in south-west Borneo. The influence

of the Hinduism of this period is still reflected in the Malay literature and in various traditional ceremonies.

The Hindu-Buddhist period of Malaysia's history began to end with the advent of Islam in the region. Brought primarily by Gujarati (Indian) and Arab traders across the Indian Ocean, there is evidence of the presence of the religion in the region as early as the thirteenth century. After 1400, Islam became a major influence with the conversion of the Malay-Hindu rulers of Malacca. From Malacca, Islam spread to other parts of the Malay Peninsula and to the Malay states in Sumatra and along the trade routes throughout the Indonesian archipelago. The Malay kingdom of Malacca, which covered the entire area of the Peninsula and the eastern coast of Sumatra and Brunei for hundreds of years, marked the classical age of Malay culture.

European colonisation of the country began in the early 15th century with the fall of Malaccan Empire to the Portuguese in 1511, followed by the Dutch who took control of Malacca in 1641. In 1824, the Dutch gave Malacca to the British in exchange for Batavia in Java. European power in the region remained restricted until the British intrusion at the end of the 18th century that bought with it the resources and organisation of the Industrial Revolution. From their new bases of Penang (1786), Singapore (1819) and Malacca (1824), which became collectively called the Straits Settlements, British influence and power spread into the Malay Peninsula, and the process of political integration of the Malay States of the Peninsula into a modern nation-state began. Sarawak, once part of the Sultan of Brunei's Empire, had been ruled by a Rajah (White King) named James Brooke and his descendants since 1841. In 1888, Sarawak and North Borneo (Sabah) became British protectorates (Abdullah and Pedersen 2003).

The Japanese occupied the Southeast Asian region, including Malaya, Sabah and Sarawak during the World War II from 1942 to 1945. The British were able to resume their authority in the region after the war but faced an entirely new political situation. This shattered Western colonial supremacy and unleashed the forces of incipient nationalism. By the Federation Agreement of 1948, the British prepared the way for the country's independence with the Malay rulers playing an important role in its administration through a federal legislative and an executive council presided over by the British High Commissioner. Under twin pressures of a communist rebellion (the emergency) and the development of a strong Malay nationalist movement (represented by the United Malay National Organisation), the British introduced elections, starting at the local level in 1951.

Under the Federation Agreement of 1948, the British government was paving the way for eventual self-rule and independence for the Federation. Accordingly, local-level elections were held in 1951 followed by federal-level elections in 1955. An alliance between UMNO, the Malayan Chinese Association (MCA) and the Malayan Indian Congress (MIC) resolved the problem of obtaining political cooperation among the main ethnic groups in the country to fight for independence. The UMNO-MCA-MIC Alliance won an overwhelming victory in (51 of 52 seats contested) during the first federal-level elections held in 1955. This provided the basis for the achievement of full independence on August 31, 1957 led by Tunku Abdul Rahman who became the first Prime Minister.

The Federation of Malaysia, including Singapore, Sabah and Sarawak came into being in September 16, 1963. The reasons for its formation were primarily

political rather than economic. The government of Federation of Malaya wanted to avoid the risk of the spread of communist control, which at that time was also of great concern to Singapore. Sabah and Sarawak as small commonwealth territories in Borneo, without any apparent future as independent states, were brought into the Federation, providing an ethnic and political balance to the largely Chinese population of Singapore. Brunei, which had also intended to join the federation, withdrew from negotiations because of various disagreements, particularly with respect to the position of its sultan.

The first years of Malaysia's existence saw a serious challenge from Indonesia. Confrontation between the two neighbouring countries was ended by an agreement signed in Bangkok in 1966. In the meantime, again mainly for political reasons, Singapore separated from the federation (with the agreement of Malaysia) and became a fully independent republic in August 9, 1965. Except for 1969, the ruling coalition of political parties, the National Front (formerly the Alliance), won in every general election and retained its majority in parliament. Communal tensions resulted in the May 13, 1969 incident in Kuala Lumpur, leading to the establishment of an emergency government known as the National Operations Council. Parliamentary rule resumed in 1971. Since then the broad aim of the government has been fulfilment of the New Economic Policy (NEP), which was designed to eradicate poverty regardless of race and to eliminate the identification of occupation with race (Abdullah and Pedersen 2003).

The 1980s brought with it a new political directions and economic challenges. Since 1981, Malaysia has focused on the search for new sources of support and

development including the Look East Policy, the initiation of heavy industrialisation and an aggressive foreign policy.

4.3 Political Environment

Malaysia's political system is based on the concept of constitutional monarchy and a bicameral Parliament headed by the paramount ruler (King) with a federal government modelled along the lines of the British Westminster system. Most political parties in Malaysia are organised along ethnic and religious lines. A National Alliance government has uninterruptedly controlled the government since pre-independent elections in 1955. The Muslim Malays dominate the coalition through UMNO; the Malaysian Chinese Association (MCA) represents the Chinese in their ruling coalition while Indians (mostly Hindus) who occupy a subordinate position are represented by the Malaysian Indian Association (MIC). With the passage of time, the National Front, which succeeded the National Alliance in 1974, has broadened its representations to include parties from Sabah and Sarawak as well as a few smaller parties from the Peninsula.

Each of the main partners in the National Front lacks the full support of its ethnic group and faces opposition from parties more radical in ethnic orientation. The government's secular and sometime heavy-handed approach has alienated some traditional Muslims. Parti Islam se-Malaysia (PAS), the principal opposition party, has been growing in strength since the early 1990s and is in a position to challenge for political control of the country. PAS can be viewed as a populist movement which sees UMNO's efforts in promoting modernisation as subscribing to Western materialism. Since 1990, the predominantly Malay state of Kelantan has been

controlled by PAS, the leaders of which believe that the traditions of Islam and the words of the Quran are not open to modern interpretations. Under this leadership, the Islamic sharia penal system has been introduced, making the state more Islamic. Currently banned leisure activities include carnival rides, most public performances that include singing and dancing and other leisure activities where there is contact between the sexes. The state government also ordered unisex hair salons to be closed, curtailed alcohol sales and forbid men and women to stand in the same supermarket checkout lines.

Chinese-dominated political opposition is expressed through the Democratic Action Party (DAP), which tends to be strongest in the main cities along the west coast, particularly in Penang Island and the Federal Territory of Kuala Lumpur where the proportion of non-Malays is high. Parti Rakyat Malaysia (PRM) finds support mostly among intellectuals, whereas Parti Keadilan Nasional is the youngest of Malaysia's political parties, founded only in 1999, with its main support base among the reform movement. Both PRM and Keadilan Party stress their multiracial composition of their members.

4.4 The Malaysian Economy

In order to understand the changing trends in consumer behaviour, it is useful to gain some understanding of the economy of the country as a number of economic factors either directly or indirectly influence consumer behaviour. This section provides a brief historical account of the transformation that has taken place in the Malaysian economy since independence.

Prior to the declaration of independence in 1957, the Malayan economy was based predominantly on the primary sector (agriculture and mining) and on international trade which became more than a device for optimum allocation of resources. Its economic activities were largely concentrated on the preparation of natural rubber and tin for export, on the output of a variety of food crops and small-scale manufacture for domestic consumption and on the entrepot trade and commercial and financial services for the domestic market. At that time, the Federation of Malaya had become the world's largest producer of tin and had the second largest output of natural rubber. Together they accounted for 70 percent of total export earnings, 28 percent of government revenue and 36 percent of total employment (Lin 1994).

The Federation of Malaya, as well as Sabah and Sarawak, were nevertheless primarily agricultural societies. Rice, the staple food of the population, was the major food crop and rubber was the major commercial crop, accounting for well over 80 percent of the total cultivated area. Despite the dominant position of rice and rubber, there were a number of other important agricultural cash crops such as pepper and coconuts and the export timber was of growing economic importance. Rough estimates of the industrial origin of the gross domestic product (GNP) in 1957 suggested that approximately 40 percent of the value added in the GNP was accounted for by agriculture, forestry and fishing, provided employment for two-thirds of the labour force and contributed two-thirds of the country's export earnings (Lin 1994). Almost the entire output of rubber and palm oil was exported. Other export products of importance were tinned pineapples, coconut oil, copra and timber. The mining industry, particularly tin, was also an important contributor to the national income,

though not comparable in importance to agriculture. Manufactured goods were the third largest industrial group after agriculture and commerce, but no sub-component of manufacturing was particularly large.

In the early years of independence, the country's economy expanded at an average annual rate of 4 percent per annum with the agriculture sector, the main foreign exchange earner and source of employment as the main income generator (Lin 1994). However, despite high productivity in the agriculture sector, most of the population were either unemployed or engaged in low-income employment. Besides, the agriculture sector did not provide enough growth impetus for the overall economy (Okposin, Abdul-Hamid and Ong 1999). The industrial development was still in its infancy, mainly concentrated in resource-based industries such as the processing of rubber, tin and wood products, as well as simple import-substitution industries dealing with food, beverages and tobacco products, textiles and rubber and plastic goods (Lin 1994).

As a result of a profound emphasis on the manufacturing sector in the late 1960s with the implementation of First Malaysian Plan (1966-70) and the establishment of a Free Trade Zone Area (FTZ) in the early 1970s as well as other incentives under the 1968 and 1974 acts, the Malaysian economy has gradually turned from a trade-oriented economy based on agriculture commodities to a more diversified export-oriented economy. The pace of industrial development gathered momentum with the shift in emphasis from import-substitution to the promotion of exports, especially in labour-intensive industries such as electronics and textiles (as Malaysia had a comparative advantage in terms of low labour costs and a well educated work force), in addition to rubber and palm oil processing, as well as wood-

based industries (Okposin et al. 1999). With the discoveries of oil and gas fields off Sarawak, production of crude petroleum also began to gain significance, at a time when the relative importance of tin was on the decline (Ariff 1991). By the end of the 1970s, the Malaysian economy had undergone significant growth and structural transformation. Growth in real GDP had accelerated from 6 percent per annum in the 1960s to 7.8 percent per annum in the 1970s, making the country one of the dynamic growing economies (Lin 1994).

The decade of the 1980s saw further diversification of the economy into heavy industries culminating in oil refineries, steel industry and the production of the national car in 1986. There was a shift in emphasis in the economy during the last quarter of the 1980s which witnessed the growing importance of the manufacturing sector. On the other hand, the agriculture sector which traditionally provided the growth impetus to the economy experienced decline in growth rate from 5 percent per annum in 1970s to 0.8 percent in the 1980s (Okposin et al. 1999). In 1987, the contribution of manufacturing sector in terms of its share GDP accounted for 22.5 percent, surpassed the agriculture sector (Lin 1994). The chief manufactured exports include electronic, chemical, wood-based and fabricated metal products; textiles and clothing; and transport equipment.

The year 1990 saw the replacement of the New Economic Policy (NEP) by the National Development Policy (NDP) which aimed for balanced development and at creating a more united and just society. The Sixth Malaysia Plan (1991-95) implemented the first phase of the Outline Perspective Plan (OPP) which proved a runaway success with high economic growth within an environment of relative price stability and low inflation. Economic growth during this period was remarkable, with

a sustained real GDP rate grew by 8.1 per cent per annum being recorded, the highest growth rate relative to other ASEAN and Asian countries, with the exception of China (Mohd. Salleh et al. 1998). In 1996, the share of the manufacturing sector in GDP accounted for 34.3 per cent compared to only 12.8 per cent for the agriculture sector (Ariff 1998). This rapid expansion was due to the investments in physical infrastructure, education and training, research and development and large inflow of foreign direct investment. Together these factors led to the dramatic shift of industrial focus from an investment-driven economy, which dominated the 1970s and 1980s to a productivity-driven economy in the 1990s (Okposin et al. 1999). Spectacular gains also have been recorded in reduction of poverty throughout Malaysia. Government policies and programmes, with their emphasis on creating balanced and equitable development, have helped to reduce sharp ethnic disparities in income and social well-being.

The Asian financial crisis from 1997 to 1998 severely interrupted ten years strong growth of Malaysian economy. The impact of the financial and economic growth during this period became evident when the country's real GDP contracted by 2.8 percent in the first quarter; 6.8 percent in the second quarter, 9.0 percent in the third quarter and 8.1 percent in the fourth quarter of 1998. The real GDP for the whole of 1998 indicated a reduction in growth to 6.8 percent resulting in the decline of per capita income by 1.8 percent or RM11,835 (Okposin et al. 1999). At the same time, the unemployment rate increased from 3.6 percent in 1997 to 3.9 percent in 1998. The total number of retrenchment was 19,000 workers in 1997 and 83,865 in 1998. Out of this total number, about 54 percent were from the manufacturing sector, 28 percent

from the service sector and another 11 percent from the construction sector (Bank Negara Malaysia 1999).

The beginning of the 2000s witnessed some encouraging sign of economic recovery. Despite the challenging external environment, the Malaysian economy regained its momentum in 2002, registered a growth of 4.1 percent and further 4.6 percent in the second quarter of 2003. The latest data reported by Asia Pacific Economic Cooperation (APEC) indicated that the Malaysian economy grew by 8 percent in the second quarter of 2004, the fastest in four years and stronger than market expectations. Thus with the current economic performance, it is expected that Malaysia will show high growth rates throughout the next decades.

Malaysia is presently classified as a newly industrialised developing country (NIC). Described as “Asia’s Tiger with a vision” (Selvarajah 1993), Malaysia is looking forward to being classified as a fully developed country by the year 2020 (Okposin et al. 1999). In line with this vision, the government has launched another programme as an extension of the previous policies, namely the Eighth Malaysia Plan 2001-2005 as the first part of the implementation of the Third Outline Perspective Plan 2001-2010 (OPP3). The plan aims to shift the growth strategy from input-driven to one that is knowledge-driven in order to enhance potential output growth, accelerate structural transformation within the manufacturing and services sectors, revitalise the agriculture sector and strengthen socio-economic stability.

4.5 Demography

Having outlined the economy, it is vital now to consider the basic demographics of the country. Knowing the population, its numbers, location and content is the key to

understanding the demography of a country. Consumer buying patterns are largely influenced by their demographic characteristics.

Malaysia's population is relatively small compared with that of its neighbouring countries such as Thailand and Indonesia. The total population of Malaysia, according to the Population and Housing Census 2000, was 23.27 million compared to 18.38 million in 1991 thus giving an average annual population growth rate of 2.6% over the 1991-2000 periods. This rate was similar to that of the 1980-1991 periods which also recorded an average annual growth rate of 2.6% (Malaysian Department of Statistics 2001). Of this total population, about 21,890 thousand or 94.1% were Malaysian citizen. Of the total Malaysian citizens, Bumiputera comprised 65.1%, Chinese 26% and Indians 7.7%, the ethnic composition being 60.6%, 28.1% and 7.9% respectively in 1991. Non-Malaysian citizens totalled 1,385 thousand (or 5.9%) in Census 2000 as against 805 thousand (or 4.4%) in 1991. One apparent trend is that household size in Chinese homes has been shrinking steadily while Malay family size is growing. By 2020, as a result of this phenomenon, the Chinese are expected to make up just 18.7% of the population (New Straits Times 2001).

The proportion of Malaysian population below 15 years of age in the Census 2000 was 33.3% compared to 36.7% in 1991. State-wise, this proportion is very low in the Federal Territory of Kuala Lumpur (25.6%), Penang (26.9%) and Selangor (30.5%). At the end of the spectrum, this proportion was high in the states of Kelantan (41.5%), Terengganu (40.3%) and Sabah (38.4%). Conversely, the proportion of population 65 years and over for Malaysia in Census 2000 was recorded at 3.9% compared to 3.7% in 1991. Consequently, the median of age for Malaysia as a whole increased from 21.9 years in 1991 to 23.6% years in 2000. All these different age

parameters point out clearly towards a continuation of the trend of population ageing in Malaysia.

In term of sex ratio, Population Census 2000 revealed that for Malaysia as a whole, men outnumbered women, a pattern similar to that observed in 1991. There were 104 males for every 100 females, a marginal increase over the sex ratio of 103 in 1991 (Malaysian Department of Statistics 2001). With respect to marital status, the Census 2000 revealed that the proportion of single person aged 20-34 years continued to increase between 1991 and 2000 from 43.2% to 48.1%. Among females in the 20-24 years of age, 68.5% were single in 2000 compared to only 60.2% in 1991. Similar patterns were also observed for females in the 25-34 age group, as well as among males. The tendency of young male adults to marry at a later age is indicated by the data on mean age at first marriage which showed an increase from 28.2 years in 1991 to 28.6 years in 2000 while for females the increase was from 24.7 years to 25.1 years over the same period (Malaysian Department of Statistics 2001).

A survey of household members conducted by Bakar (1991) on the characteristics of the family lifecycle in the Klang Valley (whose distribution closely resembles the national racial composition) reveals that a majority, or 58.4% of the 1500 families sampled, are in the “full-nest with children” categories. The average household size is 5 members (2 adults, 3 children). 29% of the total are aged 25-35 years, have been married less than 10 years and have several children, with the youngest child under 6 years old. Another 29% are older, married, and have older children, while the third largest category is that of the singles, aged between 25 and 35 years, with over half of this subgroup earning over RM1500 in monthly income, and one-third being full-time students.

The spatial distribution of the population in the Peninsula reflects an urban density of more than 80 percent, whereas a rural bias is apparent in Sabah and Sarawak (averaging 65 percent). Overall there has been a remarkable shift in urban-rural distribution during the past two decades (1980s and 1990s); the 1980 population census recorded an urban population of 34 percent; in 1991, this figure rose to 51 percent (Ooi 1999). Malaysia's urban population is expanding at 3.4% per year, a rate matched in Asia only by India (Asian Demographics 2002). Most of the urban development is taking place along peninsular Malaysia's west coast with the major cities of Kuala Lumpur (the national capital), Penang, Ipoh and Johor Bahru experiencing rapid urbanisation during the 1980s and 1990s (Ooi 1999). The eastern half of the peninsula is still largely rural and traditional.

4.6 Consumer Behaviour

The previous section has described the basic demographics of Malaysia. This section presents some selected aspects of consumer behaviour in this country including income and buying power, lifestyles and leisure activities.

4.6.1 Income and Buying Power

Malaysia is presently classified as an upper-middle income country, and considered as one of the most developed of the developing countries. Statistics indicate that the proportion of middle-income households, defined as those earning between RM1,500 to RM3,500 per month, has increased from 32.3% of total household population in 1995 to 37% in 1999 (PricewaterhouseCoopers 2004). Mean monthly gross income per household also has experienced an increase of 5.2% per annum between 1995 and

1999, from RM2,020 per month to RM2,472 per month in 1999. This figure further increased to RM3,011 per month in 2002, denoting average growth of 6.8% per annum (PricewaterhouseCoopers 2005).

On average, households living in urban areas spent 1.5 times more than households living in rural areas. Average consumer spending stands at RM1,943 per month in the urban areas and RM1,270 per month in the rural areas (PricewaterhouseCoopers 2005). Additionally, of the two geographical areas, the West Coast of Peninsular Malaysia has the highest mean of household income of between RM3,127 and RM4,104 in 2002. On the other hand, East Malaysia being the less developed region recorded average mean household income in 2000 of between RM1,904 to RM2,124 (PricewaterhouseCoopers 2004).

There were 2.4 million credit card holders in Malaysia by 2000, up 16.9% from 2.07 million in 1998 (Asian Economic News 2000). Despite having one of the highest savings rates in Asia, Malaysians are showing an increasing willingness to take on debt (National Trade Databank 1999).

4.6.2 Lifestyles

The Malaysian lifestyle study conducted by the Survey Research Malaysia (SRM) using 2,021 adults in 1990 has clustered Malaysian consumers into seven major psychographic segments. The segments identified are the *Not-Quite-Theres*, the *Upper Echelons*, the *Rebel Hang-Outs*, the *Sleepwalkers*, the *Inconspicuous*, the *Kampong Trendsetters* and the *Traditionists*. These segments differ in their attitudes, values and activities that they engaged in. The profiles of these segments are briefly described in Table 4.1.

A recent psychographic study by Fing and Mohd. Salleh (2001) based on 2,358 adults revealed seven lifestyle clusters of Malaysian consumers: the *Generasi Era Baru*, the *Respectable Providers*, the *Silver Spoons*, the *Struggling Fatalists*, the *Boleh Believers*, the *Quiet Country Homebodies* and the *Happy-Go-Lucky Kampongists*. Table 4.2 illustrates salient points of these segments with regards to their demographic and psychographic profiles.

Table 4.1 Seven segments of Malaysian lifestyles

<p><i>Not-Quite-Theres</i> (10%) Malays (64%), age between 20 to 29 years old with white-collar jobs. Introvert, less active, do not prefer new experience and less confidence. They are strong in moral, tradition and religious values. Nationalistic people and prefer eating out. Prefer shopping activities and visit recreational centres. Prefer picnic and camping. Also prefer to involve in sport activities.</p> <p><i>Upper Echelons</i> (5%) Urban dwellers, 66% Malays, male, high percentage of white collar workers with high income. They are very family and community oriented. Highly ambitious, extrovert, confident people and active in social activities. Like to hold on moral and traditional values. Perceive themselves as leaders. Very active in sport activities and other activities such as picnic, theatre and visiting recreational centres.</p> <p><i>Rebel Hang-Outs</i> (16%) Chinese (82%), age between 15 to 29 years old, urban dwellers, single, students, high income group with white collar jobs. Less religious, moral and traditional values. Not very patriotic. Prefer to spend their time at hawker stalls, coffee shops or fast-food restaurants. Like to gambling and visit shopping centres, karaoke and disco. Active in sport.</p> <p><i>Sleepwalkers</i> (12%) This segment tends to be female Chinese (70%), elderly housewives with some or no formal education. This group is very inactive in social and physical activities. Do not prefer reading; do not have high ambition and less family and community orientation. Very pessimistic and do not spend much. Not active in any activities except playing mahjong and buying lottery ticket. Not active in sport activities.</p> <p><i>Inconspicuous</i> (10%) Malays (58%), women, housewives, skilled and semi-skilled workers, household income above RM501 (67%). They tend to be average in many things. Not active and do not prefer to participate themselves in social activities. Less self-confidence but optimistic people. They are traditional and morally upright. Moderate involvement in sport activities.</p> <p><i>Kampong Trendsetters</i> (16%) Malays, rural dwellers, male, age less than 30. Highly ambitious, prefer to socialise, extrovert, confidence and nationalistic people. They tend to be very religious but not on moral values. They are community and family oriented people. See themselves as leaders. Active in sport. Prefer to participate in group activities.</p> <p><i>Traditionists</i> (32%) 84% Malays, age over 30 years old, rural dwellers, low income, blue collar workers and housewives with some or no formal education. Very traditional oriented, very religious and morally upright, nationalistic people. Do not prefer to involve in sport or other activities. Like to visit mosque.</p>

Source: Survey Research Malaysia (1990)

Table 4.2 Malaysian lifestyle segments (MLS)

<i>Generasi Era Baru</i> (16%)	<p><i>Gender:</i> 54% male <i>Average age:</i> 29 years <i>Race:</i> Malay dominant <i>Location:</i> market centre, rural, urban <i>Region:</i> all over Peninsular Malaysia <i>Average household income:</i> RM1979 <i>Marital status:</i> 55% married <i>Education:</i> middle secondary & below <i>Occupation:</i> students/white collar</p>	<p><i>General/country:</i> patriotic, contended with Malaysia, confident, concerned for their country <i>Personal/moral values:</i> self determining and forward looking although go by the look (traditions instilled) <i>Future:</i> striving to improve <i>Environment:</i> environmentally conscious <i>Finance/money:</i> control money, money 'sensible' relationship <i>Spiritual values:</i> religious, spiritual, honest <i>Health:</i> health conscious <i>Shopping:</i> controlled spending and love to bargain but they are not bargain hunters</p>
<i>Respectable Providers</i> (16%)	<p><i>Gender:</i> 45% male <i>Average age:</i> 36 years <i>Race:</i> Malay dominant <i>Location:</i> other rural, urban <i>Region:</i> skewed East <i>Average household income:</i> RM1810 <i>Marital status:</i> 72% married <i>Education:</i> average <i>Occupation:</i> white/blue collar</p>	<p><i>General/country:</i> optimistic, confident, traditional looking (inward looking), not open to West/Singapore, instill nationalism <i>Personal/moral values:</i> family focused, rational, home proud <i>Environment:</i> slightly environmentally conscious <i>Finance/money:</i> money is controlled, love their job <i>Spiritual values:</i> religious, honest <i>Health:</i> health conscious <i>Shopping:</i> cheap bargains, branded goods</p>
<i>Silver Spoons</i> (16%)	<p><i>Gender:</i> 53% male <i>Average age:</i> 33 years <i>Race:</i> Chinese dominant <i>Location:</i> market centre, other urban <i>Region:</i> north, central, south <i>Average household income:</i> RM3233 <i>Marital status:</i> 55% married <i>Education:</i> upper secondary & above <i>Occupation:</i> PMEBS</p>	<p><i>General/country:</i> outward focused, for Westernization <i>Personal/moral values:</i> modern, party all out to have fun, leisure (outgoing) <i>Future:</i> planners, in control <i>Environment:</i> slightly environmentally conscious <i>Finance/money:</i> in control of money <i>Spiritual values:</i> free spirited, not religious but piety very strong <i>Health:</i> weight conscious (external beauty), not overly concerned with health issues <i>Shopping:</i> not bargainers, familiar brands (brand loyalty, sense of belongings)</p>
<i>Struggling Fatalists</i> (16%)	<p><i>Gender:</i> 49% male <i>Average age:</i> 36 years <i>Race:</i> Chinese skewed <i>Location:</i> market centre, other urban <i>Region:</i> skewed central <i>Average household income:</i> RM1959 <i>Marital status:</i> 69% married <i>Education:</i> low secondary & below <i>Occupation:</i> blue collar</p>	<p><i>Personal/moral values:</i> lost and accept their destiny/fate in life, discontented. Feel restricted by family/social pressure. Anti family <i>Future:</i> what enjoyment now. Lazy – hate their job, risk takers <i>Environment:</i> not environmentally conscious <i>Finance/money:</i> impulse spender <i>Spiritual values:</i> superstitious (fortune tellers, bomoh, sinseh) <i>Health:</i> not health conscious <i>Shopping:</i> anti adverts, impulse buyers</p>

Boleh Believers (14%)

Gender: 54% male
Average age: 36 years
Race: Malay dominant
Location: market centre, rural
Region: north, central
Average household income: RM1753
Marital status: 69% married
Education: average
Occupation: white/blue collar

General/country: less concerned, only local issues
Personal/moral values: goes with the flow and give in, rather than argue a point
Future: belief in luck, want fun
Environment: conflicting
Finance/money: not in control
Health: very concern about personal health
Shopping: impulse buying, brand conscious, want to try new things

*Quiet Country
Homebodies (16%)*

Gender: 43% male
Average age: 45 years
Race: national average
Location: rural skewed
Region: north, south
Average household income: RM1340
Marital status: 82% married
Education: primary
Occupation: housewife/retired

General/country: not concerned, oblivious to happenings around, pessimistic
Personal/moral values: traditional, family focused, inward focused, not sociable (homebodies)
Future: not confident, not ambitious
Environment: not environmentally conscious
Finance/money: money is an important status, cannot save
Spiritual values: a bit dishonest
Health: not health conscious
Shopping: price, not pro-ads, not bargain hunters, not brand conscious but likely to be brand loyal, low involvement in shopping

*Happy Go Lucky
Kampongists (16%)*

Gender: 50% male
Average age: 36 years
Race: skew Malay
Region: skew east
Average household income: RM1798
Marital status: 72% married
Education: lower secondary & below
Occupation: labourers

General/country: not concerned but confident
Personal/moral values: home proud, contented, family focused
Future: believe in good luck
Environment: support environmental standard
Finance/money: enjoy leisure
Spiritual values: religious
Health: concerned with exercise, food, elderly and child healthcare
Shopping: price, pro-ads, bargain hunters, familiar brands (brand loyal)

Source: Fing and Salleh (2001, p. 8-9).

4.6.3 Leisure Activities

Othman and Ong (1993) conducted a large scale study to examine the leisure activities of young, urban Malaysian adults. The study was based on a survey involving more than 2,000 respondents in Peninsular Malaysia. The respondents were asked to indicate the extent to which they participated in a list of 28 leisure activities. Seven demographic variables were included in the study namely sex, age, race, marital status, income, education level and religion. The findings indicated that these demographic variables did have a strong bearing on the extent of leisure activities participated by the respondents. Table 4.3 exhibits a summary profile of activity participations of young, urban Malaysian adults.

Table 4.3 A summary profile of activity participations

Profile	Characteristics
General profile	<p>Actively pursued activities (more than 90 per cent of the respondents participated in these activities:</p> <ul style="list-style-type: none"> a. Watching television b. Listening to music c. Listening to radio d. Reading <p>Least participated activities:</p> <ul style="list-style-type: none"> a. Playing tennis b. Playing basketball c. Aerobics d. Bowling e. Playing mahjong f. Going to turf club
Sex profile	
Male:	More active than the females in most of the activities. Active in most of the outdoor or sports related activities like badminton, swimming and jogging.
Female:	Participated more in five activities, including window shopping and aerobics.

Age profile

- 15 – 20 group: The most active group. Highly involved in sixteen activities, including watching television, listening to music and badminton.
- 21 – 30 group: Most active in six activities. These include window shopping, travelling-sightseeing and beach activities.
- 31 – 40 group: The least active group. More involved in three activities, viz photography, playing mahjong and going to turf club.

Marital status

- Single: The most active group. Active in both indoor and outdoor activities.
- Married without children: The least active group. Most active in four activities: watching video, beach activities, squash and turf club.
- Married with children: Relatively active in watching sports events, travelling, photography and fishing.

Race Profile

- Malay: Ranked lowest in terms of participation in most activities. Participated relatively more in five activities, including fishing and visiting museum.
- Chinese: The most active ethnic group. Participated relatively more in sixteen activities, including travelling-sightseeing, swimming, computer games, beach activities and playing musical instruments.
- Indian: Average participations, vis-à-vis the other two ethnic groups.

Income Profile

- Low: Participated more in four activities: watching television, listening to music, listening to radio and visiting museum.
- Medium: Average participations in most activities.
- High: The most active group. Participated more in six activities, including computer games, tennis and turf club. These activities are associated with affluent lifestyle and/or involve financial resources.

Religion profile

- Islam: Fairly active group. Relatively active in religiously approved activities like watching television, listening to radio, reading, jogging, fishing and visiting museum.

Christians:	The most active group. Relatively active in listening to music, going to library, playing musical instruments, partying, playing squash, bowling and going to turf club.
Atheists:	One of the more active groups. Relatively active indoor and outdoor activities, like window shopping, swimming, travelling, computer games, photography and going to disco.
Buddhists/ Taoists:	One of the more active groups. Relatively active in indoor oriented activities like watching video, playing badminton, beach activities, playing table tennis, playing basketball, bowling and mahjong.
Hindus:	The least active group.
Education profile	
Form Three and below:	One of the two inactive groups. Relatively active in partying, fishing, going to discos, visit museum and going to turf club.
Form Five:	Another inactive group. Relatively active in watching television, listening to radio, watching video, fishing and aerobics.
Form Six/ diploma:	The most active group. Relatively active in outdoor activities like window shopping, travelling, swimming, beach activities etc.
University:	The second most active group. Relatively active in indoor activities like reading and going to library.

Source: Othman and Ong (1993)

4.7 Cultural Environment

Present day Malaysia is multicultural, multilingual and multireligious, where different groups and communities live side by side, while maintaining their separate identities. Its cultural environment is characterised by its population of aborigines and descendants of immigrants mainly from Asia. Malaysia thus can be viewed as a microcosm of Asia (Leete 1996), with the three largest communities in its heterogeneous population: Malays, Chinese and Indians; representing samples of Asia's three most populous populations - Indonesia, China and India. There are also other small minorities, the largest of which are the Orang Asli, a rural indigenous people (Ng, Van and Pala 1992).

4.7.1 Ethnicity

During the years when Malaysia was under British rule, the three ethnic groups, Malays, Chinese and Indian, lived separately from each other. They were encouraged to maintain their own unique culture and customs, religious values and way of life. Although national harmony has been emphasised, the Malaysian government since its independence has encouraged each ethnic group to maintain its own culture.

A recent statistic based on the Population Census 2000 shows that the indigenous population (consisting mainly of Muslim Malays) contribute 65.1% of the total population, while the Chinese and the Indians account for 26% and 7.7% of the population, respectively. Others ethnic group consists of 1.2% of the population (Malaysian Department of Statistics 2001). A closer look of this ethnic diversity would see a breakdown of two main categories of Malaysians. The Bumiputra (meaning "sons of the soil") are those with cultural affinities indigenous to the region,

while those of the non-Bumiputra group lie outside. These two ethnic categories are detailed in the following sections.

4.7.1.1 Bumiputra Groups

The Bumiputra groups themselves are highly differentiated. There are three broad categories: the Malays, Malay-related and the aborigines or “Orang Asli”. Malays are the most homogeneous ethnic group in Malaysia in terms of culture, language and religion, forming the predominant ethnic group in the Malaysia Peninsula, a smaller group in Sabah and a substantial minority in Sarawak. Within the Malay population, there are cultural differences from state to state but the overall Malay culture is overshadowed by a strong influence of religion (Haque and Masuan 2002). By definition, a Malay is “one who speaks the Malay language, professes Islam and habitually follows Malay customs” (Andaya and Andaya 2001). Aside from Malaysia, people of Malay origin also can be found in the neighbouring countries including Indonesia, Brunei, Philippines, Singapore, Thailand, Cambodia and Vietnam and outside the region reaching as far as South Africa, Sri Lanka and Australia.

The second Bumiputra category consists of the Malay-related ethnic groups found in Sabah and Sarawak. In Sabah, the Kadazan (Dusun) form the largest single ethnic group, which accounted for 18.4% of the total state’s population, and are largely Christian subsistence farmers. In Sarawak, the largest of non-Malay Bumiputra are the Iban (also known as Sea Dayak) who also form the largest ethnic group, accounted for 30.1% of the state’s total Malaysian citizens (Malaysian Department of Statistics 2001). The Iban who still live in traditional jungle villages live in longhouses along the Rajang and Lupar rivers and their tributaries. Other

ethnic groups in Sarawak include the Bidayuh (Land Dayak), the Melanau, Kenyah, Kayan and Bisayah. They follow a shifting mode of agriculture and have acquired their present identities and characteristics in a process of separation over centuries.

The Aboriginals or Orang Asli represents the oldest element in the population and are a very small minority in Peninsula Malaysia, numbering about 93,000 or less than one percent of the national population (Abdullah and Pedersen 2003). Traditionally nomadic hunter-gatherers and agriculturists, the Orang Asli can be found in the very remote area and remain the most backward group. The Orang Asli are commonly divided ethnically into three broad groups which are the nomadic Negritos in the northern and central regions, the semi-nomadic Senoi of the central area who practise a form of shifting cultivation, and the Jakuns of the southern region, often termed proto-Malays, who are increasingly adopting sedentary farming life. Orang Asli are primary adherents of traditional religions but nowadays many of them have converted to Islam.

4.7.1.2 Non-Bumiputra Groups

The non-Bumiputra groups consist primarily of the Chinese and Indians, with much smaller communities made up of Arabs, Armenians, Filipinos, Eurasians and Europeans. There was no substantial permanent settlement of Chinese and Indians in the country until the 19th century, with the exception of the Chinese Baba community in Malacca who can trace their ancestry to the 16th century Malacca. The massive immigration of Chinese and Indians that came later was due to the economic policies pursued by the British colonial administration. The outbreak of the Second World War

and the Japanese occupation effectively ended Chinese and Indian immigration altogether.

The Chinese were derived largely from South China and include Hakka, Teochew, Fuchow and Hainanese with the Cantonese and Hokkein forming the largest dialect groups (Abdullah and Pedersen 2003). From the early days, they were mainly found in the urban centres, dominated the economic power and controlled the tin mining and rubber industries, which were the country's main sectors. The Chinese brought with them their distinctive identity and culture with its amalgam of Confucian, Taoist and Buddhist elements and various dialects with Mandarin as the language of the educated groups. To this day, they sponsor their own cultural and social activities, and hold on to their primary ties to the family and associations based on their dialectical or geographical origins in China.

The Indians were brought to Malay peninsular under indenture system to be recruited as labourers to work in the sugar cane, coffee and rubber plantations as well as railways during the British administration in the late 19th century. Other Indians who were not recruited as labourers, especially from the North Indians and the Ceylonese Tamils, found professional jobs and opened businesses in the west coast towns. Some 80 percent of Indian community in Malaysia are descended from the low-caste labourers from South India. The remainder 20 percent include a wide range of castes, language and occupational groups from various areas of India (Kent 2000). They include mainly Tamilians, Pakistanis, Malayalis, Bangladeshis, Ceylonese or Sri Lankans, Punjabis, Bengalis and Gujeratis in descent (Abdullah and Pedersen 2003).

The Indians maintain that family solidarity should be shared by all relatives, and all members of the family should be integrated into the community. In Malaysia,

social and religious functions relating to marriage, birth and death are treated as important occasions among the Indians and this practice helps to maintain family and community solidarity among Indians.

4.7.2 Language

A country's language is the key to understanding its culture, as spoken language is an observable cultural manifestation (Terpstra and Sarathy 2000). In Malaysia, the official language is Malay. Most Malays speak Malay, while Indians speak mainly Tamil, but also other Indian dialects such as Telegu, Malayalam, Punjabi, Hindi and Bengali. Mandarin is being used among Chinese in place of Chinese dialects that clustered and concentrated themselves in different areas throughout their respective "clan" network (Abdullah and Pedersen 2003). These include Hokkein (35% of the Chinese population), Hakka (23%), Cantonese (18%), Teochew (11%), Foochow (5%), Hainanese (4%) and others (4%). English is widely spoken in the urban areas and is the language of business community. At least 15 languages can be identified among the indigenous people of Peninsular Malaysia, while in East Malaysia, there is also language diversity; the largest are Kadazan in Sabah and Iban in Sarawak (Abdullah and Pedersen 2003).

4.7.3 Religion

Another basic cultural characteristic of the Malaysian society is its religious diversity. Most of the world's major religions have substantial representation in the country and the main adherents of each religion largely reflecting the multi-cultural character of the population. Population Census 2000 shows that Islam was the most widely

professed religion in Malaysia, its proportion increasing from 58.6% in 1991 to 60.4% in 2000. Being a multi-religious nation, Malaysia also had a fair share of those embracing other religions including Buddhism (19.2%), Christianity (9.1%), Hinduism (6.3%) and Confucianism, Taoism and other traditional Chinese religion (2.6%).

Malays are differentiated from the other two major Malaysian ethnic groups, the Chinese and the Indians, because they are closely associated with the religion of Islam. It has been reported that 100% of Malays are Muslims (Malaysian Department of Statistics 2001). Islam constitutes a key element in Malay ethnic identity and therefore has critical impact on the development of Malay culture. According to Mastor, Jin and Cooper (2000), all Malays are Muslims by birth, and a Malay who rejects Islam is no longer legally considered a Malay. Islam permeates every facet of life of the Malays, especially in the realm of values and behaviour. It is neither possible for a Malay to leave Islam and remain a Malay, or for a non-Malay to marry a Malay and not convert to Islam. In the realm of value, the Malays rely heavily on religious sources. As Islam teaches that the divine law is immutable and absolute, it is very rare to see Malays oppose the absoluteness of values written in the Quran and the sayings of the Prophet Muhamad (Mastor et al. 2000). Almost all Malays practice their faith within the Sunni tradition without the comparative availability of other religions or Islamic alternatives such as Shiism (Lee 1993).

There has been intensification in recent years of the practice of Islam among Malaysian Muslims. As traditional village values erode through rapid urbanisation, media influence and consumer culture, Islam is increasingly sought to provide order and meaning to modern life. Azhar (2001) wrote that over the past 15 years, there has

been a religious awareness taking place among the Malays, resulting in a religious revival in this country. Although no study is presently available looking at the practices of local people, one could estimate that 90% or more of the Malay population generally seen as practicing their basic beliefs of Islam (Haque and Masuan 2002).

The Buddhism amongst the Malaysian Chinese is associated with the great waves of immigrants who came into the country in the 19th century and after. In Malaysia, Buddhism is the second largest religion professed after Islam, with a form of Mahayana Buddhism widely practiced by the Chinese community. The majority of Malaysian Buddhists are Chinese-speaking Mahayanists, many of whom do not make clear distinctions between Buddhist and Chinese folk religious practices (Lee 1993). Buddhism is also the religion of the Thais and a number of Sinhalese and Burmese in the country, which belong to Theravada School of Buddhism. Malaysian-Thais can be found particularly in the border of northern states of Malaysia, which have been subject to Thai political influence over the past three centuries (Information Malaysia 2000).

There are about two million Tamil Indians who are mainly found in the western states of Peninsular Malaysia particularly in Selangor and Perak with slightly more than 80 percent of them Hindu (Lee 1993). According to Lee (1993), the distinct differences between northern and southern forms of Hinduism in India are reflected in the way Hinduism is practised in Malaysia, in which popular Hinduism in Malaysia is characterised strongly by Tamil beliefs and styles of worship. Besides these regional identifications, Malaysian Hindus also categorise themselves into different castes, in

which a person's social status is inherited at birth and cannot be altered during their lifetime.

Caste ideas still operate informally among members of the Indian community in Malaysia despite the fact that the structural props supporting the caste system are no more there in its entirety. The central religious tenet of orthodox Hinduism is that men are not equal and have never been. The inequality of men is explained in terms of the merits and demerits accrued in previous incarnations (Knott 1998). Therefore, each caste is required to live according to its ordained way of life (dharma). However, in the contemporary society of Malaysia, the caste system has little functional value except when Indians themselves use it as a cultural marker to distinguish their members.

Christian churches were first established in Malaysia with the arrival of the Portuguese 500 years ago. As the Portuguese are Roman Catholics, Catholicism is the earliest and has remained the most dominant grouping among Christians in Malaysia today, accounting for approximately 40 percent of Christian population (Chew 2000). The real missionary period for Christianity came in the 19th century, a period of Christian revivalism in Europe, and both Roman Catholic and Methodist missions played a conspicuous role in establishing hospitals and English-medium schools across the country. There are also smaller Christian groups from the United States, which have been active in Malaysia since 1945 (Information Malaysia 2000).

Most of Christianity followers in Malaysia are from non-Malay groups, Chinese, Indians and others. According to Chew (2000), Christian populations in Malaysia can be divided into 19 denominational groups which includes Roman Catholic, Anglican, Christian Brethren, Presbyterian Church, Basel Christian Church,

Methodist, Evangelical Lutheran Church, Seventh Day Adventist, Mar Thoma Syrian Church, True Jesus Church, Borneo Evangelical Mission, Assembly of God, Pentecostal Church, Christian Evangelical Commission, Lutheran Church, Malaysian Baptist Convention, Evangelical Free Church, Latter Rain Church and Full Gospel Assembly.

4.7.4 Religious Beliefs and Practices

For the purpose of gleaning some insight into Malaysian culture related to the topic of investigation, this section outlines the main tenets of four main religions in Malaysia, namely Islam, Buddhism, Hinduism and Christianity. Since it was suggested by a number of marketing scholars that religions have important implications for consumer behaviour, the more obvious rules of conduct and the principal beliefs of each religion will be discussed. This discussion would serve as a basis for subsequent interpretation of the findings obtained. It should be noted, however, that the religious beliefs and practices discussed here are not necessarily unique only to Malaysian society.

4.7.4.1 Islam

Islam was established in Mecca by the Prophet Muhammad in 610 AD. The name of Islam is the infinitive of the Arabic verb, which means submission, and the Moslem is the person who submits himself to the one sole God (Rippin 1990). Islam is understood by Muslims as the original pure monotheism which God has made known to mankind since the creation and which was revealed through many prophets before Muhammad. Muslims see Islam as identical with the true monotheism which earlier prophets before Muhammad such as Noah, Abraham, Moses and Jesus had taught.

In Islam, the basic belief is that God (Allah) is one and Muhammad is the last in a series of prophets sent by God and that there can be no other after him. The Quran (anglicised as Koran) is the final word of God in which is written all that has happened and all that will happen. It provides definite guidelines for people in all walks of life to follow and thus anything not mentioned in the Quran is quite likely to be rejected by the faithful. The guidance is comprehensive and includes the social, economic, political, moral and spiritual aspects of life. It states clearly the halal (lawful) and haram (forbidden). The Quran was supplemented by the hadith and sunnah, which contain the reported words and actions of the Prophet Muhammad. These works contain the primary sources of guidance for all Muslims on all aspects of life. Islam may be understood to comprise three fundamental areas, which are aqidah (articles of faith), sharia (divine law) and akhlaq (ethic).

Aqidah concerns all forms of faith and belief by a Muslim in Allah and His Will. Aqidah is based on the following six principal elements of belief:

1. Allah is the only one true God
2. belief in the existence of angels
3. belief in scriptures. The four inspired holy books in Islamic faith are the Torah of Moses, the Psalms of David, the Gospel of Jesus Christ and the Quran of Prophet Muhammad
4. belief in prophets. The five greatest prophets in Islam are Noah, Abraham, Moses, Jesus and Muhammad
5. belief in last days (a time of resurrection and judgement) and
6. belief in divine will. An important element of Muslim belief is that everything that happens, good or evil, proceeds directly from the divine will and is

already irrevocably recorded on the preserved tablet. This fatalistic belief tends to restrict attempt to change which may be a rejection of what Allah has ordained.

Sharia, on the other hand, constitutes the framework within which Muslims can undertake all forms of permissible practical actions emanating from this belief. The law is regarded as of divine origin, although it is administered and interpreted by human beings, it is understood as the law of God. Based on the Quran and hadith, the sharia gives details of required duties and outlines all types of human interactions. It essentially constitutes what elsewhere would be considered criminal, personal and commercial law. These Islamic guidelines cover all aspects of human life and categorise human behaviour as obligatory, merely desirable or neutral. The principle goal of sharia is to guide human beings in their quest for salvation because the basic purpose of human existence is to serve God. Divine guidance is to be accepted as given and it is believed to meet both the spiritual and psychological needs of the individual, making him or her a better social being. The non-ritual divine guidance covers, among other areas, the economic activities of society. This latter guidance offers people a wide range of choices while protecting them from evil. A set of basic values restricts economic action and should not be violated or transgressed (Rippin 1990).

The third area of Islam is akhlaq. This aspect lays the behavioural, attitudinal and ethical patterns upon which Muslims should base their practical actions. With these three fundamental areas, Islam has been regarded by its followers as extending over all areas of life, not merely those of faith and worship, which are commonly viewed as the sphere of religion today. To the Muslims, there is no

compartmentalisation between religion and secular aspects of life, rather they see life as an integrated whole and they aim to live out Islam in all areas of their life. Thus, Muslims prefer to call Islam a way of life rather than just a religion.

Muslims are expected to practice the five pillars of their religious duty, representing the epitome of the revealed law as enacted through ritual activity. The five pillars are regarded as essential signs of a Muslim's submission to God and identity with the Muslim community. These are the profession of faith (shahada) briefly stated as "there is no God but Allah and Muhammad is the prophet of Allah", obligatory prayers (salat) five times daily at stated hours, alms giving or charity (zakat), fasting from sunrise to sunset during the month of Ramadan (except for the sick and ailing or those on a journey) and finally to perform the pilgrimage once in a person's lifetime to Mecca provided health and wealth permitting.

For the true Muslim, the achievement of goals is both a result of individual efforts and also a blessing from God. A Muslim should therefore not neglect the duty of working hard to earn a living. Muslims are required to uphold the Islamic virtues of truth, honesty, respect for the right of others, pursuit of moderation, sacrifice and hard work. Moderation applies to virtually all situations. The resulting Islamic welfare economy is based upon the bond of universal brotherhood in which the individuals, while pursuing their own good, avoid wrongdoing to others. In their economic pursuits, true Muslims not only have their own material needs in mind but accept their social obligations and thereby improve their own position with God.

The Islamic value system, as it relates to economic activities, requires a commitment to God as well as a constant awareness of God's presence even while engaged in material work. The main point of Muslim economics is concerned that the

wealth of her people be widely shared. Islam does not oppose the profit motive or economic competition, as long as the practice is not contradicted with the sharia law. In Islam, wealth is to be used in basic needs in moderation. With the real ownership of wealth belonging to God, man is considered only a temporary trustee. Material advancement does not entail higher status or merit. All people are created equal and have the right of life, the right of liberty, the right of ownership, the right of dignity and the right of education.

Islam is the only major religion that permits polygamy, although many Muslims have only one wife. The allowing of multiple wives reflects the sub-ordinate position of women in Islamic life. The different sects of the religion restrict the activities, behaviour, dress and the rights of women. This is changing somewhat as Islam attempts to adjust to modern times and as women are increasingly resisting the old traditions. However, the role of women is clearly restricted, to some degree, both in and out of the home.

4.7.4.2 Buddhism

The religion of Buddhism was established in India around 530 BC and is based on the teachings of Siddharta Gautama Buddha. Buddhism began with the teachings of the Buddha and was propagated through the community of disciples he established. To some extent, Buddhism springs as a reformation of Hinduism, developing as a protest against alleged corruption in the Hindu faith. It did not abolish caste but declared that Buddhists were released from caste restrictions. Buddha opened his movement to members of all castes, denying that a person's spiritual worth is a matter of birth. This openness to all classes and both sexes was one reason for Buddhism's growth.

However, while accepting the philosophical insights of Hinduism, Buddhism tried to avoid its dogma and ceremony, stressing tolerance and spiritual equality (Palmer and Keller 1990).

The teaching of Buddhism is not based on holy writings nor does it expound dogmatic creeds or ceremonies. Instead, Buddhism attempts to guide its followers through a method of self-discipline that will lead to a life of good works and inner peace of mind. There are three principal beliefs in Buddhism: (1) reincarnation which is the notion that all things go through countless cycles of birth, death and rebirth; (2) karma or the cosmic law of cause and effect by which virtuous conduct is rewarded in future reincarnations and bad conduct leads to retribution; and (3) the idea that the path of wisdom involves taming the appetites and passions of the flesh. At the core of the Buddhism is the realisation of the Four Noble Truths. These are:

1. The Noble Truth of Suffering states that suffering is omnipresent and part of the very nature of life. Existence is essentially painful from the moment of birth to the moment of death. Even death brings no relief, for the Buddha accepted the prevailing Indian idea of life as cyclical, with death leading to further rebirth.
2. The Noble Truth of the Cause of Suffering cites the cause to be desire, that is, desires for possession and selfish enjoyment of any kind.
3. The Noble Truth of the Cessation of Suffering states that suffering ceases when desire ceases.
4. The Noble Truth of the Eight-Fold Path that leads to the Cessation of Suffering, offers the means to achieve cessation of desire.

This Noble Truth of the Eight-Fold Path is also known as the Middle Way because it avoids the two extremes of self-indulgence and self-mortification. The Eight-Fold Path includes (1) the right views, (2) the right desires, (3) the right speech, (4) the right conduct, (5) the right occupation, (6) the right effort, (7) the right awareness and (8) the right contemplation. These eight are usually divided into three categories that form the cornerstone of Buddhist faith: morality, meditation and wisdom (Palmer and Keller 1990).

The ultimate goal of the Buddhist path is release from the round of phenomenal existence with its inherent suffering. To achieve this goal is to attain Nirvana. It is defined as an impersonal ultimate reality, a state of cessation of all passion and desire. Nirvana is the reward for those who are able to stay on the path throughout their lifetime or more probably, lifetimes. Buddhism followers believe that Nirvana or state of perfection comes not from God, but from one's self. Buddhism carries no guarantee of salvation, but places the burden of purification on each individual. The higher concepts of Buddhism are tolerance, non-violence, respect for the individual, love of animals and nature, the spiritual equality of all human beings, and the relative unimportance of self. The religion is more concerned with improving the quality of life rather than raising the standard of living. It preaches a system of human conduct based on rationality with very little reliance on the supernatural.

The concept of karma is another important doctrine of Buddhism. The Sanskrit term karma literally means 'action' and as a technical term it refers to a person's intentional acts and their ethical consequences. Human actions lead to rebirth, wherein good deeds are inevitably rewarded and evil deeds punished. The karmic process operates through a kind of natural moral law rather than through a system of divine

judgement. One's karma determines such matters as one's species, beauty, intelligence, longevity, wealth, and social status. Karma of varying types can lead to rebirth as a human, an animal, a hungry ghost, a denizen of hell or even among the various categories of gods (Palmer and Keller 1990).

Although never actually denying the existence of the Gods, Buddhism denies them any special status or role. Gods' lives in heaven are long and pleasurable, but they are in the same predicament as other creatures, being subject eventually to death and further rebirth in lower states of existence. Buddhism followers believe that Gods are not creators of the universe or in control of human destiny and that Buddhism denies the value of prayer and sacrifice to them.

4.7.4.3 Hinduism

Hinduism is regarded as the most ancient and the longest living natural religion in the world which evolved from the religion of the Vedas over the last roughly 4000 years. One of the strengths of Hinduism over the centuries has been its ability to absorb ideas from outside; that is, Hinduism tends to assimilate rather than to exclude. The corresponding influence of these various religions on Hinduism, as it has an extraordinary tendency to absorb foreign elements, has greatly contributed to the religion's syncretism, that is, the wide variety of beliefs and practices that it encompasses (Palmer and Keller 1990).

There are two categories of scripture in Hinduism: the Vedas, which are the ancient Sanskrit scriptures from the preceding Vedic religion; and a range of texts which have since emerged throughout the development of Hinduism (Knott 1998). The followers of Hinduism can be divided into two groups, that is, those who seek the

sacred and profane rewards of this world such as health, wealth, children, and a good rebirth, and those who seek release from the world. The principles of the first way of life were drawn from the Vedas and are represented today in temple Hinduism and in the religion of Brahmins and the caste system. The second way is represented not only in the cults of renunciation but also in the ideological ideals of most Hindu (Knott 1998).

One of the principal tenets of Hinduism is the concept of reincarnation or transmigration of the soul. The range of possibilities in which one might be born successively includes plant, insect, fish, mammal, man and ultimately even god, and still the round of rebirth goes on. The cycle of rebirth was fuelled by a chain of cause and effect linked to 'action' or karma. Hinduism followers belief that all living things were subject to this cycle of rebirth and although good actions might bring a better rebirth, the suffering and inevitability inherent in the process were seen by many Hindus as intolerable (Knott 1998). Because of this, the followers of Hinduism have a very different perspective on life. Due to the unceasing nature of the cycle of rebirth, they do not want more of life but to get out of it and find ultimate rest (Herman 1991).

Karma is another belief that related to the idea of reincarnation. All Hindus believe that expiations and rituals can counteract karma by "working out" through punishment or reward and ultimately by achieving release from the entire process of rebirth through the renunciation of all worldly desires. In Hinduism philosophy, karma is the sum total of one's actions, good or bad, that are attached to the soul as it transmigrates, each new body (and each event experienced by that body) being predetermined on the basis of one's action. As such, one enjoys happiness or experiences sorrow accordingly. But mundane happiness is transient and uncertain.

The only way of seeking perpetual happiness is to find ways and means to attain salvation through various rituals and religious practices (Knott 1998).

Although all practising Hindus accept the belief in karma, they differ on many points. Some aspire to amass good karma and a good rebirth, but others regarding all karma as bad, aim to release from the process of rebirth altogether; some believe that karma determines all that happens to one, whereas others attribute a larger role to destiny, divine intervention, or human effort. This “law of the deed” together with the belief in transmigration has served to keep one relentlessly on the cycle of rebirth (Herman 1991).

In one sense, Hinduism is a simple religion with no hierarchy, no divine revelation and no rigid moral code. In another sense, however, it is extremely complex with endless subtleties. An apparent contradiction is that Hinduism has only one true God, but it also has millions of gods which contribute to the complicated theology (Palmer and Keller 1990). However, most individual worshippers are primarily devoted to a single god or goddess, of whom Shiva, Vishnu, and the Goddess are the most popular. The objective of Hinduism is to achieve union with the eternal spirit of God, through the common ideals of purity, non-violence, self-control, truth, detachment, charity and compassion toward all living creatures. One of the ways that the last ideals are expressed is the taboo on eating meat (Knott 1998).

Veneration of the cow is the best-known Hindu identity. The Hinduism followers associate the cow with several ideas such as non-injury, purity, purification, goodness and motherhood (Knott 1998). Another element of traditional Hinduism is the restriction of women, following the occasional belief that to be born a woman is

sign of sin in a former life. Marriages are arranged by relatives. Although a man may remarry if widowed, a woman may not (Terpstra and Sarathy 2000).

A critically important aspect of Hindu's social practice is the caste system. Hindus acquire caste status by being born into a particular caste group and they generally marry someone from the same caste. The division of society into higher and lower castes most probably had its origins in the various skin colours; however, caste came to enjoy a religious sanction. In the Hindu's society, at the top, having many privileges is the Brahmins or priestly caste. Following in descending order are the warriors, merchants and labourers. Although this caste system is not one based on wealth, with those on the top being the richest, it is the case that those at the bottom have little access to resources (Knott 1998). So low that they are not even parts of the system are the untouchables or outcasts. These basic divisions are further subdivided for many complex reasons into over 3,000 subcastes (Terpstra and David 1991). The caste system is aimed at conserving the status quo in society at large.

Because of the belief in the law of karma, it is accepted that human inequalities result from one's own doing and not from the actions of the gods. Thus, one is born into high or low caste, or even non-human form, depending on how one lived in a past life. One is also born into a future caste as one behaves in their life. The concept of caste further forms the basis for social organisation and the division of labour. Each member of a particular caste in Hindu society has a specific occupational and social life, which is hereditary. Occupations tended to be hereditary, the son learning from the father. It was a small step, then, for caste, related to the status of the individual and their role in society, to become strictly hereditary, thus further assuring the supremacy of the Brahmins.

Another element and strength of Hinduism is *baradari* or the joint family. After marriage, the bride goes to the groom's home. After several marriages in the family, there is a large joint family for which the father or grandfather is chief authority. In turn, the older women have power over the younger. The elders advise and consent in family council. The Indian grows up thinking and acting in terms of the joint family. For example, if a member goes abroad pursuing his or her studies, the joint family may raise the funds. In turn, that member is expected to remember the family if he or she is successful. The aim of *baradari* is to preserve the family (Terpstra and Sarathy 2000).

4.7.4.4 Christianity

Christianity is based on the life and teachings of Jesus Christ who was a descendant of David. He was born in Bethlehem and grew up in Nazareth. Jesus was thought by many to be the promised Messiah of the Hebrew Scriptures. Jesus is believed by the great majority of Christians to be the incarnate Son of God, and to have been divinely conceived by Mary, the wife of a carpenter of Nazareth named Joseph (Palmer and Keller 1990).

Although Christians disagree in their understanding and definition of what makes Jesus distinctive or unique, they would all affirm that his life and example should be followed and that his teachings about love and fellowship should be the basis of human relations. Jesus' teaching stressed the infinite love of God for the lowest and weakest individuals, and he promised pardon and eternal life in heaven to the most hardened sinners, provided their repentance was sincere. Jesus cannot be less than the supreme preacher and exemplar of the moral life, but for most Christians that,

by itself, does not do full justice to the significance of his life and work (Palmer and Keller 1990).

Within Christianity, the Church is divided into three great branches. Roman Catholicism focuses in the Vatican City in Rome and spreads from there, being dominant through central and southern Europe, Ireland and South America. Protestantism dominates Northern Europe, England, Scotland and North America. The third great division, Eastern Orthodoxy has its major influence in Greece, the Slavic countries and Russia. The following paragraphs briefly discuss two major branches of Christianity in Malaysia: Catholicism and Protestantism.

With the Pope as its sole head, the Catholic regards itself as 'the only road of salvation' (Palmer and Keller 1990). Catholicism is based on the life and teachings of Jesus Christ. Catholicism maintains belief in the Trinity: God the Father, Jesus the Son and the Holy Spirit. It also maintains that the Church was built on Peter, an apostle of Jesus Christ, who was the first pope or titular head of the Catholic hierarchy. Thus, Catholicism followers adhere to the doctrine of the infallibility on religious questions of all who assume the position of pope. Significant in the Catholicism religion is the elaborate hierarchy of the organised church, the rituals and rites of confession and penance, the belief in the immortality of the soul, the mass, infant baptism, clerical celibacy and the symbolism of the crucifix (Palmer and Keller 1990).

The Protestant religion developed as a reform movement to the alleged corruption in the Catholic Church. While there were prior attempts at change, the movement really took shape in 1517 when Martin Luther posted his ninety-five theses on the door of the Church in Wittenburg, Germany, a detail attacking the Pope's

authority and the selling of indulgences. The basis for the Protestant movement is the conviction that salvation may not lie in the acceptance of the authority of the Church, but through faith in Jesus Christ. Protestant followers believed that salvation is the gift of God, gained by faith in his promise that Christ paid the penalty for man's sins by his death. Individuals are free to approach God for themselves without the need of any intermediary such as the church, sacrament, priest or saint (Palmer and Keller 1990).

Within the Protestant movement, there are doctrinal differences from sect to sect, but virtually all of these religions accept the Trinity of God, Jesus Christ His Son and the power of the Holy Spirit. Most Protestants believe in the immortality of the soul, the Virgin Birth and the importance of the Bible as the source of a Christian's spiritual guidance. The last mentioned belief allows the individual the freedom to interpret God's words without Church authority in any form. Most Protestant denominations reject clerical celibacy, restrictions on women being ordained ministers, and prohibitions on artificial measures of birth control (Palmer and Keller 1990).

Table 4.4 Comparison of religions

RELIGIONS	ISLAM	BUDDHISM	HINDUISM	CATHOLICISM	PROTESTANTISM
Approx. beginnings	610 AD	530 BC	2,000 BC	1 Cent. AD	16 Cent. AD
Holy writings	Koran	None	Vedas	Bible	Bible
Mono/Polytheistic	Monotheistic	Polytheistic	Polytheistic	Monotheistic	Monotheistic
Locus of control	God's Will	Individual	Individual	Church hierarchy	Individual
Reliance of supernatural	Moderate	Weak	Weak	Strong	Moderate
Immortality of soul	Yes	Yes	Yes	Yes	Yes
Reward and retribution after death	Yes	Yes	Yes	Yes	Yes
Idealised life directives	Submit to will of God at all times	Pursue tolerance, respect for individual and unimportance of self	Pursue self-control, charity, detachment, non-violence and compassion	Follow example of Jesus	Follow example of Jesus
Other major beliefs/practices	Muhammad is Prophet Prayer five times a day Fasting during Ramadan Pilgrimage to Mecca Taboo: alcohol and pork	Reincarnation Control appetites and passions Follow middle path	Reincarnation Caste system Taboo: meat	Jesus is Son of God Trinity of God, His Son and Holy Spirit Confession and penance Infallibility of pope	Jesus is Son of God Trinity of God, His Son and Holy Spirit Individuals can approach God directly Strong work ethic
Anticipated consumer behaviour	Affect food and drink consumption More open to new brands, products and stores Less effort to acquire market information	Less materialistic Select adequate quality products Less demanding of service Less desire for material consumption	Behaviour depends on consumer's caste Less effort to acquire market information More willing to accept only adequate products, service and prices	Prefer more popular products, known and more advertised brands Responsive to advertising Less effort to acquire market information	Place more effort in shopping Seek more market information Less likely to believe advertising Prefer honest and trusting buying relationships

Source: Adapted from Bailey and Sood (1993, p. 337)

4.8 Summary

This chapter has given background information of Malaysia where the fieldwork of the research is conducted. The researcher has discussed various aspects relating to Malaysia's geographical environment, political system, economic development, demographic structure and cultural aspects with particular emphasis on ethnic and religious background of the population.

Concluding, the unique characteristic of Malaysia today is an outcome of long historical processes, moulding the social life of the different ethnics as well as the economic and political structures of the country. Its position which lies on the crossroads of trade between east and west Asia has an ancient history as a centre of trading commerce between Europe, west Asia, India and China. As a result of influences from major powers that dominated the region throughout the history, Malaysia has become a multicultural society. About 40 percent of the total Malaysian populations are non-indigenous peoples consisting of various ethnic backgrounds with the Chinese and the Indian as two major ethnic groups in addition to the indigenous Malay, existing side by side. Members of these three ethnic groups differ with regards to their socio-economic status, religion, culture and traditional values.

Although constitutionally Malaysia is a secular nation, religion plays a significant part in the value system and lifestyles for many ethnic groups in the country. The majority of Malaysians are Muslim, but it has large Buddhist, Hindu and Christian minorities. Islam is regarded as an inseparable part of Malay ethnicity and is ingrained in its culture and much of Malay cultural values are fundamentally religious. For the Chinese, Confucianism is the main guiding beacon in their culture although religious affiliation may be different among the Chinese. A substantial proportion

practices ancestral worship while a larger number are Buddhists, Christians and Muslims. Similarly, the Indians practice their culture with the possible influence of their religious affiliation. Hinduism is the dominant religion for the Indians, while Christian, Islam and Sikhism are also commonly practiced.

Despite this amalgam of religious and cultural values, regrettably, there is little or no research examining the relationship between religion and consumer behaviour in the Malaysian cultural context. The present study investigates this association, with results complementing existing research in the Western culture and could be applicable to other consumer markets with similar characteristics. It is intended that the present study would provide an impetus for further research in this area especially from the Malaysian perspective. An extensive examination into religious influences is important for a thorough understanding of consumer behaviour in a different culture.

The next chapter outlines the process of carrying out the research, that is, research methodology. The data collected will then be evaluated and used to falsify or accept the hypotheses.

CHAPTER 5

METHODOLOGY

5.0 Introduction

In the previous chapter, the researcher discussed the Malaysian cultural context within which this study is carried out. This chapter documents the various considerations relating to the methodology of the study.

Methodology or method - the semantics of these two terms often lead to debate and even disagreement. Methodology is viewed as the development of the research by the researcher whereas method is often considered the actual technique. Holloway (1997, p. 105) defines methodology as:

“Methodology refers to the principles and philosophy on which researchers base their procedures and strategies, and to the assumptions that they hold about the nature of the research they carry out. It consists of ideas underlying data collection and analysis. Methodology is more than method. The latter merely involves the procedures and techniques adopted by the researcher.”

Research is a multi-step process and can be described as a systematic and organised effort to investigate a specific problem that needs a solution (Sekaran 1992). A framework of research (Nunamaker et al. 1991, p. 92), illustrated in Figure 5.1, is a relationship between a body of knowledge (i.e. research domains and research methodologies) and a research process. A research methodology is the combination of processes, methods and tools in conducting research in a research domain. A research process comprises understanding the research domains, asking meaningful research questions and applying valid research methodologies to these questions. Results from

a research project contribute to the body of knowledge by promoting clear understanding and enhancing knowledge in a given research domain (Nunamaker, Chen and Purdin 1991).

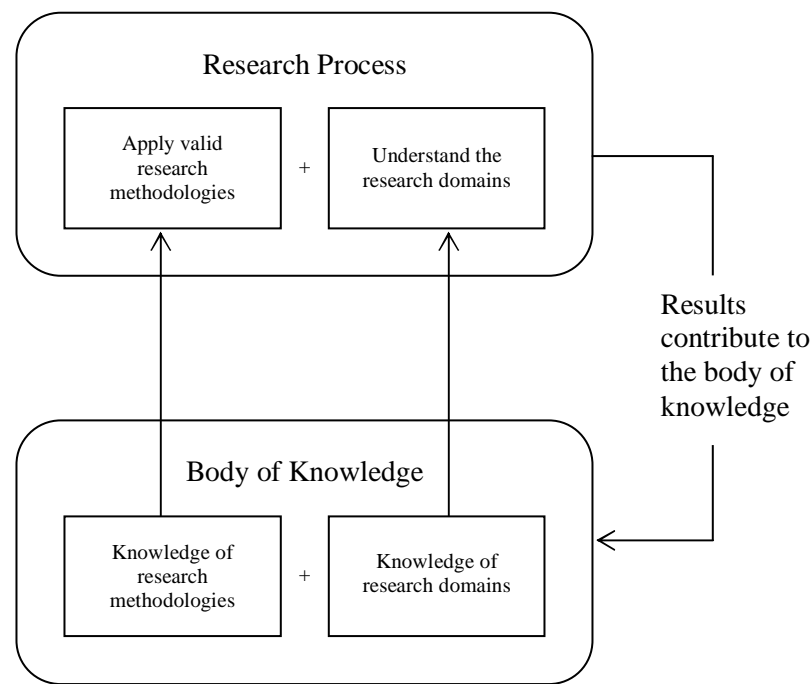


Figure 5.1 A framework of research

Recognising the importance of a systematic research methodology from above, in this chapter issues relating to the paradigm of research will first be discussed and justified. This is followed by the selection process of the data collection method. The available options of method in collecting the empirical data will be evaluated and compared before the mode of communication for the survey is determined. Next, the chapter outlines the construction of the survey instrument. The discussion focuses on the measurement format, context of questionnaire, composition of questionnaire,

translation process, evaluation of the measurements and pilot testing. The sampling process is described next. Additionally the chapter discusses the conduct of fieldwork survey and the ethical considerations of the study. The chapter concludes with a summary of the methodology employed.

5.1 Options in Research Paradigm

Any discussion of research methods will be incomplete without firstly considering the fundamental issues relating to the research paradigm. Here the main purpose is to demonstrate how the specific research paradigm that the researcher decides to use helps him in structuring the collection of data and the overall research process. This is a necessary way to begin the methodological discussion because the choice of a research position will have implications for what, how and why research is carried out (Carson, Gilmore, Perry and Gronhaug 2001).

Easterby-Smith, Thorpe and Lowe (1991) pointed out three reasons of why an understanding of “philosophical issues” of a research is very useful. Firstly, it can help the researcher to understand the overall components and procedures of research to be undertaken. Secondly, it can help the researcher to recognise which design will work well in solving research problems. Thirdly, knowledge of research philosophy can help the researcher to identify and create designs that may be beyond his or her past experience.

In discussing the philosophical issues of research, the first question that comes to mind is “what is a paradigm?” The term paradigm is a concept made famous by the philosopher of science Thomas Kuhn through his works in the early 1960s, which refer to “a basic orientation to theory and research” (Neuman 1994, p. 57). It also may

be referred to “a whole way of thinking about something” (Holliday 2002, p. 5).

Another definition has been provided by Sarantakos (1998, p. 31-32) who sees a paradigm as:

“a set of propositions that explain how the world is perceived; it contains a world view, a way of breaking down the complexity of the real world, telling researchers and social scientist in general “what important, what is legitimate, what is reasonable”.

According to Hollis (1994, p. 85), a paradigm has two main aspects. It contains a set of guiding rules about the character of the world and how it is to be studied and also represents the social situation in which it exists. Gill and Johnson (1997) state that it is a perspective from which distinctive conceptualisations and explanations of phenomenon are proposed. A paradigm thus enables the researcher to determine what problems should be explored and what methods are appropriate.

The continuum of research philosophies in social science is anchored by the interpretivism position on one side and the positivism position on the other, with others lying on a point on a continuum between the two (Ticehurst and Veal 2000; Carson et al. 2001). The distinction between these two paradigms rests basically on one’s personal philosophy concerning the conduct of research, with positivists emphasising an inductive or hypothetico-deductive procedure to establish and explain patterns of behaviour while interpretivists seek to establish the motivations and actions that lead to these patterns of behaviour (Baker 2001). It has been emphasised that one position is not necessarily better than another, but rather are different ways of “...telling a story about society or the social world...” (Denzin and Lincoln 1998, p. 10). Neuman (1994) defines the interpretive paradigm as:

“the systematic analysis of socially meaningful action through the direct detailed observation of people in natural settings in order to arrive at understandings and interpretations of how people create and maintain their social worlds” (p. 62).

This position consists of a wide range of philosophical and sociological ideas including reflective, hermeneutics, phenomenological, qualitative, relativism, humanism, inductive, naturalism, action research or ethnographic (Ticehurst and Veal 2000; Carson et al. 2001). These approaches are associated with the symbolic interactionist or old Chicago school theoretical framework in sociology. The researchers who adopt this paradigm are known as interpretivists, experientialists or postmodernists (Neuman 1994).

According to Neuman (1994), the interpretive approach takes “a practical orientation and focuses on the issue of social integration” (p. 62). Interpretive researchers view the world as socially constructed and subjective, and they hold a central assumption that there is no reality outside of people’s perceptions (Ticehurst and Veal 2000). Hence, to discover how individuals experience their everyday lives and to understand what is going on in a given situation, researchers must learn to see things from the point of view of the people being studied. This includes consideration of multiple realities, different actors’ perspectives, researcher involvement, taking account of the contexts of the phenomena under study and the contextual understanding and interpretation of data (Neuman 1994).

The other position that has been put forward as an alternative to interpretivism is rooted in physical science and is known as the positivism approach. This position also has a range of alternative labels that includes scientific, experimental, empiricist, quantitative or deductive but each of these terms takes on slightly different shades of

meaning depending on its use (Ticehurst and Veal 2000). Neuman (1994, p. 58)

defines positivism as:

“an organised method for combining deductive logic with precise empirical observations of individual behaviour in order to discover and confirm a set of probabilistic causal laws that can be used to predict general patterns of human activity.”

The positivist research relates to the facts or causes of social phenomena and attempts to explain causal relationships by means of objective facts (Carson et al. 2001). This school of research focuses on description, explanation and uncovering facts, where the thought is accompanied by explicitly stated theories and hypotheses (Neuman 1994). The position assumes that science quantitatively measures independent facts about a single reality (Guba and Lincoln 1994). Its epistemology is based on the belief that researchers are independent and that science is value-free (Ticehurst and Veal 2000; Carson et al. 2001). In other words, the data and its analysis are value-free and therefore the data do not change because they are being observed.

Carson et al. (2001) summarises the key criteria differentiating the two paradigms as follows:

- in positivism, the researcher is independent but in interpretivist research, the researcher is involved;
- in positivism, large samples may be used whereas interpretivist research uses small numbers;
- in positivism, testing theories pervade whereas interpretivist-type research focuses on generating theories or ‘theory building’.

Table 5.1 outlines the broad definition of the positivist and interpretivist ontologies and epistemologies, and the characteristics of relevant methodologies for both philosophies. Discussions on qualitative and quantitative are presented next.

Table 5.1 Broad definitions/explanations of positivism, interpretivism, ontology, epistemology and methodology

	INTERPRETIVISM	POSITIVISM
<p>Ontology</p> <p>Nature of 'being' / nature of the world</p> <p>Reality</p>	<p>No direct access to real world</p> <p>No single external reality</p>	<p>Have direct access to real world</p> <p>Single external reality</p>
<p>Epistemology</p> <p>'Grounds' of knowledge/ relationship between reality and research</p>	<p>Understood through 'perceived' knowledge</p> <p>Research focuses on the specific and concrete</p> <p>Seeking to understand specific context</p>	<p>Possible to obtain hard, secure objective knowledge</p> <p>Research focuses on generalisation and abstraction</p> <p>Thought governed by hypotheses and stated theories</p>
<p>Methodology</p> <p>Focus of research</p> <p>Role of researcher</p> <p>Techniques used by researcher</p>	<p>Concentrates on understanding and interpretation</p> <p>Researchers want to experience what they are studying</p> <p>Allow feelings and reason to govern actions</p> <p>Partially create what is studied, the meaning of the phenomena</p> <p>Use of pre-understanding is important</p> <p>Distinction between facts and value judgements less clear</p> <p>Accept influence from both science and personal experience</p> <p>Primarily non-qualitative</p>	<p>Concentrates on description and explanation</p> <p>Detached, external observer</p> <p>Clear distinction between reason and feeling</p> <p>Aim to discover external reality rather than creating the object of study</p> <p>Strive to use rational, consistent, verbal, logical approach</p> <p>Seek to maintain clear distinction between facts and value judgements</p> <p>Distinction between science and personal experience</p> <p>Formalised statistical and mathematical methods predominant</p>

Source: Carson, Gilmore, Perry and Gronhaug (2001, p. 6)

5.1.1 Qualitative and Quantitative

Instead of positivism and interpretivism, the terms qualitative and quantitative paradigms are often used by some researchers (e.g. Leedy 1993; Creswell 1994; Punch 1998). The qualitative paradigm is inductive, holistic and subjective. It is a process-oriented approach highlighting social and anthropological worldviews. The quantitative paradigm on the other hand relies heavily on the assumptions from the positivist approach to social science. Although a position is often taken on the use of one approach or the other, it has been recognised that these two paradigms are complementary rather than contradictory (Preece 1994; Newman and Benz 1998). Thus combinations of both approaches may even be used in the same study where theory building and theory testing are objectives of the researcher. The following section highlights some important characteristics of qualitative research.

5.1.1.1 Qualitative Research

Qualitative research is concerned with understanding human behaviour and yields descriptive data. Denzin and Lincoln (1994, p. 2) describe qualitative research as follows:

“Qualitative research is multi-method in focus, involving an interpretive, naturalistic approach to its subject matter. This means that qualitative researchers study things in their natural settings, attempting to make sense of, or interpret, phenomena in terms of the meanings people bring to them. Qualitative research involves the studied use and collection of a variety of empirical materials - case study, personal experience, introspective, life story, interview, observational, historical, interactions and visual texts - the described routine and problematic moments and meanings in individuals' live.”

Qualitative research seeks explanations for complex phenomena, operations or processes, but is less concerned to seek a specific outcome. According to Yin (1994),

qualitative methods assist researchers who desire to deeply understand complex social phenomena. This approach is appropriate when seeking knowledge about the fundamental characteristics of a phenomena being studied as an adjunct to theorising about the phenomenon. This knowledge often surfaces through close contact with subjects of a study, allowing the researchers to understand their point of view about and experiences with phenomena. As Denzin and Lincoln (1994, p. 4) state:

“...qualitative implies an emphasis on processes and meaning that are not rigorously examined, or measure (if measured at all) in term of quantity, amount, intensity, or frequency. Qualitative researchers stress the socially constructed nature of reality, the intimate relationship between the researcher and what is studied... They seek answers to questions that stress how social experience is created and given meaning.”

Qualitative researchers prefer the use of inductive, hypothesis-generating research methodologies. They seek answers to questions that stress how social experience is created and given meaning. Ontologically, most qualitative researchers believe that reality is created by individuals and so they view their purpose as one of understanding how people make sense of their lives, how, in particular settings, people come to understand and manage day to day situations (Miles and Huberman 1994). Clearly, it is in the nature of qualitative research to probe scientific situations in a bid to provide much greater depth of understanding, rather than predictions of the subject under investigation, through eliciting data which consists of detailed descriptions of events, situations and interactions between people and things (Donnellan 1995).

5.1.1.2 Quantitative Research

Somewhat in contrast to qualitative research is the practice of quantitative research. It emphasises the measurement and analysis of causal relationships between variables,

not processes (Denzin and Lincoln 1994). According to the definition given by Creswell (1994, p. 2):

“A quantitative study, consistent with the quantitative paradigm, is an inquiry into social or human problem, based on testing a theory composed of variables, measured with numbers, and analysed with statistical procedures, in order to determine whether the predictive generalisations of the theory hold true.”

Quantitative research is based on the methodological principles of positivism about the nature of social reality and the methods by which it can be ‘known’ (Herbert 1990). The approach calls for controlled measurement; it is verification-oriented, confirmatory, reductionist, inferential and hypothetico-deductive. Reliability is critical and data is hard and the results are expected to be replicable no matter who conducts the research (Bryman 2001). It is also considered particularistic in that it attempts to analyse the situation at hand.

Quantitative research seeks to quantify the data by applying some form of statistical measures and control procedures that decrease bias and confounding variables as much as possible. It usually involves a relatively large number of cross-sectional or longitudinal observations with the aim of identifying potentially strong, non-random, correlations between explanatory (or independent) variable and effects (or dependant variables). Rubin and Babbie (1993, p. 30) describe:

“Quantitative research methods emphasise the production of precise and generalisable statistical findings. They believe that there is a certain objectivity about reality which is quantifiable. The data which are collected by positivists tend to be numerical and are open to interpretation by use of statistics; thus the data are said to be quantitative. When we want to verify whether a cause produces an effect, we are likely to use quantitative methods.”

Because quantitative research involves the application of statistical analysis, a theoretical model is typically developed by the researcher to illustrate the

hypothesised relationships between two or more attributes under investigation. Attributes of cases that can be linked in this way are known as variables because they are phenomena that vary by level or degree. There are two most important variables in quantitative analysis, called independent (or causal) variables which referred to as causes, and dependent (or outcome) variables, which may be defined as effects in a given analysis. The dependent variable is the phenomenon the researcher wishes to explain while the independent variables are the factors that are used to account for the variation in the dependent variables (Ragin 1998).

Thus, it can be seen that the differences between these two approaches to empirical research are quite marked. However, it is not necessary to pit these two approaches against one another in a competing stance. Both approaches have distinct approaches to research but “neither one is markedly superior to the other in all aspects” (Ackroyd and Hughes 1992, p. 30). Patton (1990, p. 39) advocates a “paradigm of choices” that seeks “methodological appropriateness as the primary criterion for judging methodological quality.” This will allow for a “situational responsiveness” that strict adherence to one paradigm or another will not.

Some researchers believe that qualitative and quantitative research can be effectively combined in the same research project. Donnellan (1995) argues that the ideal position to take in a qualitative-versus-quantitative debate is to view both types of research as playing a legitimate and important role in marketing research. Thus both alternatives need to be used in order to supplement each other whenever possible. However, the combination of these two methodologies is rarely used due to the technological and expense barriers within any one research study. Table 5.2 outlines the differences in assumptions between qualitative and quantitative approaches.

Table 5.2 Qualitative and quantitative paradigm assumptions

Assumption	Question	Qualitative	Quantitative
Ontological assumption	What is the nature of reality?	Reality is subjective and multiple as seen by participants in a study	Reality is objective and singular, apart from the researcher
Epistemological assumption	What is the relationship of the researcher to that researched?	Researcher interacts with that being researched	Researcher is independent from that being researched
Axiological assumption	What is the role of values?	Value-laden and biased	Value-free and unbiased
Rhetorical assumption	What is the language of research?	Informal Evolving decisions Personal voice Accepted qualitative words	Formal Based on set definitions Impersonal voice Use of accepted quantitative words
Methodological assumption	What is the process of research?	Inductive process Mutual simultaneous shaping of factors Emerging design - categories identified during research process Context-bound Patterns, theories developed for understanding Accurate and reliable through verification	Deductive process Cause and effect Static design - categories isolated before study Context-free Generalisations leading to prediction, explanation and understanding Accurate and reliable through validity and reliability

Source: Creswell (1994, p. 5)

5.1.2 Justifications for the Chosen Paradigm and Approach

The preceding review has revealed many important components of principles and philosophies in qualitative and quantitative paradigms. In deciding about whether to use one or the other, or both of these paradigms, it was suggested (Patton 1990; Creswell 1994; Maxwell 1996) that a number of factors should be considered including the researcher's own beliefs about the appropriate way to study human behaviour, the research questions, the rigour of the research which includes both the universality and verifiability of results; the degree of understanding of the problem provided by the method; the extent to which the results will generalise to other settings and persons; and the usefulness of the findings.

The following discussion will describe and justify the chosen paradigm and approach utilised for the present study. It is evident from the preceding review how the positivist paradigm fits with the research question and in turn shapes the methodology used. Perry, Riege and Brown (1999, p. 16-17) best summed up the paradigm as follows:

“Positivists assume that natural and social sciences measure independent facts about a single apprehensible reality composed of discrete element whose nature can be known and categorised. The objectives of the research enquiry often include the measurement and analysis across time and context. The primary data collection techniques include controlled experiment and simple surveys, which are outcome, orientated and assume natural laws and mechanisms, with the primary mode of research enquiry being theory testing or deduction.”

Perry et al. (1999) go on to discuss how the data are collected in a structured manner where the researcher does not intervene in the phenomena of interest leaving the way open for value-free testing where in essence the data do not change because they is being tested. Positivistic inquiry seeks to establish such conditions through a

framework of “regulatory ideals” (Guba and Lincoln 1994, p. 110). This framework is further supported by a quantifiable method aimed to verify or falsify hypothetical propositions. The major methodological characteristic of the inquiry is that they are predictive in nature, so that verifiable truths are confirmed.

The adoption of positivistic inquiry leads the researcher to the use of a quantitative research approach. This decision was guided by the purpose of the study, the nature of research inquiry and the concepts to be investigated. As stated at the outset, the purpose of this study is to examine the possible relationship between religious variables and consumer retail patronage behaviour, which is explanatory in nature. Thus the quantitative approach is well-suited to addressing this research goal where the main concern is with establishing a causal relationship between two or more variables. Even though the qualitative methodology provides very detailed descriptions of the phenomenon under investigation (Patton 1990; Denzin and Lincoln 1994), it is less useful for generalising and useless for testing hypotheses about relationships among variables. That is, quantitative approach is more appropriate in this study for hypotheses testing and generalisation.

The researcher personally believes that the quantitative approach, where the effects of an independent variable on dependent variables are statistically assessed, would be more appropriate and a reliable way to understand the nature of relationships among variables as well as to provide a rich contextual basis for interpreting and validating the results. This is because the interpretation and findings derived from quantitative research are solely based on measured quantities rather than impressions (Denscombe 1998). The literature review in Chapter Two illustrates that there is a substantial body of existing consumer literature on religion which conceptualises the

nature of the relationships between religious variables and aspects of consumer behaviour. Thus by the adoption of a quantitative research approach, this study follows the tradition that has developed in the literature. Therefore, in this study, it was possible to examine the relationships between religious variables and elements of consumer retail patronage by applying the same principles outlined in previous literature.

The adoption of a quantitative approach further gives the researcher additional credibility in terms of the interpretations he makes and the confidence he has in his findings. The applications of statistical techniques such as bivariate and multivariate have the advantage of allowing the researcher to measure and control variables (Edwards 1998). These statistical techniques have two important roles that help the researcher to achieve his goal (Cowan 1990). The first role is to describe a relationship in a way that makes understanding easier (i.e. the modelling role). The second role is to assess the strength and validity of any relationship defined (i.e. the testing role). Statistical tests will indicate if a particular measurement is significant and probabilistic sampling will help researchers to know whether the findings from the studies can be held true for the whole of their target segment. Moreover, the logical positivist approach maximises objectivity and neutrality (Carson et al. 2001; Grey 2004).

Another reason relates to the capability of the quantitative approach to introduce both testability and context into the research. Collecting large amount of data from a structured questionnaire survey will provide a wide coverage that may result in a real picture of the entities and phenomena under study. As commented on by Ragin (1998), looking across many cases makes it possible to average out the characteristics of individual cases and to construct an overall picture that is purified of

phenomena that are specific to any case or to a small group of cases. Thus, it is especially well suited for the basic objectives of this study. These include the objectives of describing general patterns and measuring the relationships between specific variables and making predictions.

Having discussed the empirical approach of this study, the next section describes the method of data collection. Each alternative will be evaluated in light of the specific problem investigated and the situation faced by the researcher.

5.2 Choice of Data Collection Method

As discussed in the previous section, this study will be using the quantitative approach. According to Baker (2001), experiment, observation and survey are the most commonly used methods of collecting primary data in marketing research. The following sections will discuss each of these methods and evaluate their appropriateness for collecting the required data for this study.

5.2.1 Experiment

Experiments are undertaken to determine if there is a causal relationship between the variables under investigation. This includes true experiments with the random assignment of subjects to treatment conditions and quasi experiments that use non-randomised designs (Keppel 1991). In this setting, the researcher selects two or more groups with matched characteristics. One group is assigned as an experimental group and the other as control group. The experimental group is subject to an intervention and the control group is not. The results of the two groups are then compared and contrasted before and after the intervention. If both groups were the same to start with

and at the end the experimental group exhibits different behaviour to the control group, then the researcher can draw the conclusion that changes in behaviour were due to the intervention.

In term of confirmation, experimentation is more effective in establishing the cause-and-effect relationship, but the nature of this study will not allow the researcher to manipulate any presumed causal variables and to control other relevant variables in order to establish the causation. Furthermore, while experimental research generally allows high levels of internal validity as a result of the possibility to control, randomly assign and manipulate any presumed causal variables (Tabachnick and Fidell 2001), its lower external validity and artificial environment are considered to be weaker elements (Dillon et al. 1990; Churchill 1995; Malhotra and Birks 1999). As this study aims at generating generalisable results for a wide range of consumer behaviours, external validity is an important, additional evaluation criterion. Consequently, the use of non-experimental research is considered suitable for this purpose.

Kerlinger (1986) defined non-experimental research as “systematic, empirical inquiry in which the scientist does not have direct control of independent variables because their manifestations have already occurred or because they are inherently not manipulable” (p. 348). Non-experimental research can consist of observation as well as survey methods of data collection, as discussed in the following sections.

5.2.2 Observation

In quantitative research, the observation method is used to produce numerical data. This method is termed by Kumar (1999) as a systematic and selective way of watching and listening to an interaction or phenomenon as it takes place. In his

discussion of observation method, Baker (2001, p. 378) describes:

“Observation consists of the systematic gathering, recording and analysis of data in situations where this method is more appropriate - usually in terms of objectivity and reliability - and able to yield concrete results (e.g. the flow of persons in a shopping centre) or provide formal hypotheses about relationships which can then be tested by experimentation or survey analysis.”

The observation method can be used alone or in conjunction with other forms of research to supplement the data collected (Chisnall 1997). However, while observation can accurately record what people do and how it is done, it cannot be used to determine the motivations, attitudes and knowledge that underlie the respondent's behaviour (Kinnear and Taylor 1996). Moreover, observational methods can lead to biases resulting from researchers' subjectivity related to interpreting observed behaviour (Churchill 1995; Malhotra and Birks 1999). Given this study's focus on the measurement of causal relationships and since no existing facts or established patterns of action to check, the observational method is not useful in the context of this study and some form of direct questioning of respondents is deemed more appropriate.

5.2.3 Survey

Surveys are a better known source of primary data collection in marketing and social sciences as compared to observation and experiments (Baker 2001). They are regarded as being inherently quantitative and have origins in the positivistic tradition (May 2001). According to Robson (2002), surveys are utilised in conjunction with a cross-sectional design, that is, the collection of information from any given sample of the population only once. The data are collected using a set of questionnaires or structured interviews with the intent of generalising from a sample to a population to determine

attitudes and opinions and to help understand and predict behaviour (Baker 2001).

There are two major forms of survey, descriptive and explanatory (Burns 2000, p. 566). The descriptive survey aims to estimate precisely as possible the nature of existing conditions, attributes or the parameters of the population. On the other hand, the explanatory survey seeks to establish cause and effect relationships but without experimental manipulation. The information collected from the survey can be divided into four categories: people's physical condition, behaviour, social and economic circumstances and their attitudes and opinions (McCrossan 1991).

The foregoing discussion makes it clear that a survey is the only viable method and logical choice for the study to be undertaken. The following section provides the justifications for the utilisation of survey method.

5.2.3.1 Justifications for the Survey Method

The usefulness of survey methodology for quantitative hypothesis testing has been extensively considered (Babbie 1992; de Vaus 2001; Burton 2000; Robson 2002). Survey method can provide data on attitudes, feelings, beliefs, past and intended behaviours, knowledge, ownership, personal characteristics and other descriptive items (Tull and Hawkins 1990). It aims to collect data which support generalisations to a wider population, and which can be aggregated across cases in a meaningful fashion (Baker 2001). The survey method also makes it possible to contact more subjects in a limited time than other methods would have permitted.

To illustrate the strength of the survey method, Babbie (1992) provides an explanation by citing "one person's religiosity is quite different from another's" (p. 278). As Babbie (1992) further explains, although researchers must be able to define

this concept in ways most relevant to their research goals, it is not easy to apply the same definition uniformly to all subjects. The survey is bound to this requirement by having to ask exactly the same questions of all subjects and having to impute the same intent to all respondents giving a particular response. The advantage of this standardisation is enhanced reliability. By representing respondents with a standardised stimulus, surveys can eliminate the unreliability or bias in observations made by researchers. May (2001), in his discussion on the logic of the survey method, also affirms that a survey is a rigorous approach that aims to remove as much bias from research process as possible and produce results that are replicable by following the same methods.

Survey methods attempt to be representative to some known universe, both in terms of the number of cases included and in the manner of their selection. It emphasises the concept of random sampling, that is, the procedure of selecting sample members. By using statistical techniques, characteristics of the population can be estimated from a small representative sample group drawn at random. This allows the determination of sampling error associated with the statistics, which is generated from the sample but used to describe the universe (Churchill 1995).

In addition, the survey method is applied because it does not require control over behavioural actions and mainly focuses on contemporary events (Yin 1994). With the survey method, it is possible for the researcher to measure the statistical reliability of results obtained from the sample. Meaning that, the researcher can measure the differences between results from the sample and what the result would be if the researcher could canvass the entire target population. The smaller the difference, the greater the reliability of the result, and the more confidence the researcher has in

making generalisations based on the survey. Table 5.3 illustrates the relevant situations which are best suited for different research strategies.

Table 5.3 Relevant situations for different research strategies

Strategy	Form of research questions	Requires control over behavioural events?	Focuses on contemporary events?
Experiment	How, why	Yes	Yes
Survey	Who, what, where, how many, how much	No	Yes
Archival analysis	Who, what, where, how many, how much	No	Yes/no
History	How, why	No	No
Case study	How, why	No	Yes

Source: Yin (1994, p. 6).

5.2.3.2 Mode of Communication for Survey

The next question to pose here is how to conduct the survey? Survey data is typically collected using a set of questions directed to members of a population who are expected to possess the required information. There are three potentially relevant options of communication method available to the researcher in conducting the survey: (i) personal interview, (ii) mail surveys and (iii) telephone survey (Dillon et al. 1990; Churchill 1995; Kinnear and Taylor 1996; Malhotra and Birks 1999; de Vaus 2002). The personal interview requires an interviewer to administer the questionnaire

to the respondents in a face-to-face situation. The interviewer records and codes answers as the interview proceeds. The mail survey consists of a questionnaire mailed to the respondents and the return by mail of the complete questionnaire to the researcher. The telephone interview, on the other hand, involves making telephone contact with selected sample members and asking the questions over the phone. Among these three, the personal method with self-administered questionnaire emerged as the most popular and frequently used mode of survey in investigating the influence of religion on consumer behaviour (Delener 1990a, 1990b, 1994; Andaleeb 1993; Bailey and Sood 1993; Rodriguez 1993; Sood and Nasu 1995; LaBarbera and Gurhan 1997; Loroz 2003). Other modes of communication utilised by past researchers are telephone interviews (Siguaw, Simpson and Joseph 1995; Siguaw and Simpson 1997) and mail survey (McDaniel and Burnett 1990, 1991; Essoo and Dibb 2004).

According to van der Zouwen and de Leeuw (1990), the choice between survey methods will depend on the nature of the survey, the sample, time and cost constraints, the importance of response rates and the types of questions. de Vaus (2002) highlighted five broad considerations in evaluating the relative merits of survey methods, which are response rates, obtaining representative samples, effects on questionnaire design, quality of answers and survey implementation. Table 5.4 provides an overview of the main advantages and disadvantages of three different survey methods: personal, telephone and mail surveys.

Naturally, as evidenced from the table, each of these three methods possesses several advantages and disadvantages, and thus, it can be concluded that none of the survey methods is superior in all research situations nor can claim to be the best on all criteria. Thus decisions on which method is best cannot be made in the abstract;

rather, they must be based on the needs of the specific survey as well as time, cost and resource constraints (Forza 2002). For example, personal interview might be the best in terms of flexibility, versatility and accuracy, but it is the most expensive and time consuming method. Similarly, while mail surveys are generally the least expensive; offer wider geographical coverage; ensure anonymity and reduce interviewer bias, they are also more affected by self-selection and the slowest for obtaining data due to the tendency of respondent's refusal to participate in the survey. For these reasons, the method which is best capable of meeting the data collection needs in the present study should be the one selected and has to be the trade off between several criteria.

After careful consideration of various criteria, the telephone interviewing method was ruled out partly because: (i) the questionnaire appeared to be too long, (ii) the design of the scale (i.e. Likert type) would make it difficult to administer over the telephone and (iii) some of the questions such as religious commitment and respondents' background might be too personal in nature to ask over the phone. The mail survey approach was also set aside due to (i) its natural weakness of low response rate; (ii) lack of control over sample and interviewing process; and (iii) unavailability of complete mailing list for the purpose of sampling. This process of elimination left only the personal interviewing method as a viable option, which has several advantages over the other methods of data collection. These advantages are briefly discussed in the following paragraph.

The most important feature of personal interviews is the quality of the data required. By comparison, this method offers the best sample control and allows a higher flexibility of data collection than mail or telephone interviews. Because of the face-to-face relationship nature between the interviewer and respondents, the response

rate is normally higher than in the other methods, thus making it possible to concentrate on a smaller sample size. Mail and telephone interviews would also allow explanation of the survey with the similar result, but the fact that by personally administering the questionnaire, the interviewer has the opportunity to introduce the research topic and motivate the respondents to give their honest answers, administer complex questionnaires and clarify difficult questions. This should yield both the largest quantity and highest quality of survey data. According to Burns (2000), properly designed and executed interview surveys should yield response rates of at least 80-85 percent.

In spite of these advantages, it is generally agreed that personal interviews are the most expensive method and more time consuming as compared to mail survey and telephone interviews (Malhotra and Birks 1999; de Vaus 2002; Grey 2004). These two problems are inevitable and are the major limitations for the present study, but the severity of the problems could be mitigated by concentrating on a small sample size (Burns 2000). Although self-administered questionnaire seems a practical approach to balance the time and financial constraints in completing the study with the need for including a large sample to establish the representativeness of the sample for generalisability, it was anticipated that this method would generate a low response rate and a poor quality of survey data (May 2002).

Further, because of the sensitivity of religious issues to many individuals, particularly to the Malaysian people, the only way to ensure the accuracy of information required and participation of respondents is by approaching them on a personal basis. As cautioned by previous researchers (Bailey and Sood 1993; Sood and Nasu 1995), it is very difficult to collect reliable and valid data concerning

religious issues by means of the survey method. It is very likely that individuals are reluctant to participate in the study when they became aware of the religious content of the research instrument. Thus, by personally interviewing the individuals, the purpose of the study can be explained very carefully to ensure that they will not get the wrong idea about the study.

Table 5.4 Comparisons of personal, telephone and mail surveys

Mode of Delivery	Personal	Telephone	Mail
<i>Response rates</i>			
General samples	Good	Good	Good
Specialised samples	Good	Good	Good
<i>Representative samples</i>			
Avoidance of refusal bias	Good	Good	Poor
Control over who completes questionnaire	Good	Satisfactory	Satisfactory
Gaining access of selected person	Satisfactory	Good	Good
Locating selected person	Satisfactory	Good	Good
<i>Effects on questionnaire design</i>			
Ability to handle:			
Long questionnaire	Good	Satisfactory	Satisfactory
Complex questionnaire	Satisfactory	Good	Poor
Boring questionnaire	Good	Satisfactory	Poor
Item non-response	Good	Good	Poor
Filter questions	Good	Good	Satisfactory
Question sequence control	Good	Good	Poor
Open-ended questions	Good	Good	Poor
<i>Quality of answers</i>			
Minimise social desirability	Poor	Satisfactory	Good
Make question order random	Poor	Good	Poor
Ability to minimise distortion due to:			
Interviewer characteristics	Poor	Satisfactory	Good
Interviewer opinions	Poor	Satisfactory	Good
Influence of other people	Satisfactory	Good	Poor
Allows opportunities to consult	Satisfactory	Poor	Good
Avoids interviewer subversion	Poor	Good	Good
<i>Implementing the survey</i>			
Ease of obtaining suitable staff	Poor	Satisfactory	Good
Speed	Poor	Good	Poor
Cost	Poor	Satisfactory	Good

Source: de Vaus (2002, p. 132).

5.3 The Survey Instrument

The function of a research instrument is to satisfy research objectives through the measurement of independent and dependent variables of interest (Churchill 1995). It provides insights into people's beliefs, attitudes, values and behaviour. In this study, a structured questionnaire was prepared for use in the field survey. A questionnaire permits a gathering of necessary data to enable segregation of respondents and answering the research questions.

Because the basic purpose of the questionnaire is to meet research objectives and to answer research questions, the questionnaire design can be regarded as an important facet of the research process because it directly affects the quality of the data collected (Sommer and Sommer 1991; de Vaus 2001). However, there appears to be no widely accepted theory of questionnaire design with some researchers acknowledging that the design of questionnaire process resembles an art rather than a science (Churchill 1995).

The questionnaire used in this study has been adapted and developed from previous similar studies. The decision to use a research instrument developed in other studies is in accordance with de Vaus (2001), who suggested that ideally, before developing indicators and scales, researchers should first evaluate available measures developed in previous research. According to de Vaus (2001), there are too many well-established and tested scales that researchers ignore at their own peril. Most of the items from previous measures may need updating or rewording to fit a particular context or a particular sample. Using well-established indicators can be helpful in building up a cumulative body of knowledge rather than each researcher carrying out their own idiosyncratic research with idiosyncratic measures (de Vaus 2001). In

addition, construct validity (i.e. do items measure hypothetical concepts) can be improved by utilising items or scales which have previously appeared in the literature. Mitchell and Bates (1998) state that “replications and extensions of existing scales help guard against the perpetuation of erroneous and questionable results, as well as assessing the generalisability of findings from marketing studies” (p. 200).

However, while there are various versions of measurement scales currently available for each concept, the researcher has decided to include the most relevant items that subjectively fit the research context. This has to be done since too many items included in the questionnaire would affect the length and time taken to complete the questionnaire, which in turn might distort respondents’ motivation to participate in the interviewing process. The following sections will describe in detail the process undertaken in developing the survey instrument.

5.3.1 Measurement Format of Items

The first step was to decide on the format of individual items. In asking the questions, the researcher is presented with two options, whether by using the close-ended or open-ended questions format. According to Sommer and Sommer (1991), closed-ended questions are desirable when the researcher wants the participants to choose from a set of predetermined questions that have alternative answers. The researcher provides the alternatives. In other words, the researcher wants confirmation of the answers in a specific scale for a measurement. On the other hand, open-ended questions give participants more freedom to answer the questions.

For this study, the questionnaire employed the close-ended questions format, in which the respondent is asked to select an answer from among a list provided. The

main strength of using such format is that close-ended questions are easy to ask, reduce interviewer bias, faster to administer, provide a greater uniformity of responses and are more easily processed (Kinnear and Taylor 1996). In addition, considering the differences in literacy and level of exposure to survey practices, the only mechanism in motivating the respondents to respond is to use close-questions type. This is so because it does not require the respondents to have a high level of comprehension on the topic.

Consistent with common practice, the self-report technique was used in this study to assess the attitude of the respondents. Respondents were asked directly to report their attitude or feelings by responding to one or more questions in the questionnaire. There are two possible rating approaches used for this technique, that is, graphic and itemised rating scales (Sekaran 1992; Churchill 1995). Itemised rating scales are the most frequently used scales in consumer research and therefore employed in this study. This requires the respondents to indicate their position by selecting among a limited number of categories. An itemised rating scale is quick to administer, requires little additional explanation and more importantly it is easily grasped by respondents.

All variables in the questionnaire, with the exception of questions on total spending on clothing and demography, were measured on a 5-point Likert-rating scale. The Likert scale is regarded as an itemised rating scale because each category of the scale is numbered and/or briefly described (Churchill 1995; Malhotra and Birks 1999). While the output from a pure technical standpoint is no stronger than an ordinal scale, the Likert scale is routinely treated at an interval level (Malhotra and Birks 1999). This scale is patterned after the one devised by Rensis Likert in 1932 and it has

been widely used by consumer and marketing researchers because it provides opportunity for respondents to indicate their degree of agreement or disagreement with each of a series of statements related to the attitude object under study, and responses are given a numerical score that will consistently reflect the direction of the respondents' attitude on each statement. The respondents' total score is then computed by summing scores for all statement.

The selection of this type of scaling method was also based on the following advantages. Firstly, many researchers consider the advantage of using the Likert scale is that it overcomes the criticisms of other scales by allowing the respondents to express the intensity of their feelings (DeVellis 1991; Kinnear and Taylor 1996; Burns 2000; Zikmund 2000). It is based entirely on empirical data regarding subjects' responses rather than subjective opinions of judges. Secondly, it produces more homogeneous scales and increases the probability that a unitary attitude is being measured, and therefore that validity (construct and concurrent) and reliability are reasonably high (Burns 2000). Finally, its ease of construction and the simplicity of respondent directions are regarded as true advantages of the Likert scale (Malhotra and Birks 1999).

5.3.2 Product Class

Particularly important to this study is the selection of an appropriate shopping product that would exhibit the clear characteristics necessary to examine the research area. Due to the desirability of studying marketplace behaviour with respect to specified product categories, it has been decided that the context of the questionnaire will strictly focus on a single shopping product. The most important reason for restricting

to one type of product, other than time and cost constraints, is to control for product variation as it was reported earlier that the influence of religion on consumption behaviour tends to vary by product classes (Delener 1990a). Such concentration on a single product would facilitate the discussion and consequently the marketing implications derived from the findings, which is more narrow and definable to a specific product market.

However, the selection of an appropriate product for this research required considerable care. Research indicates that products chosen for such studies should not be bound to a particular culture and should be purchased by all individuals in the population. In this instance, previous research has been limited to the purchase of a single, high-involvement product. Delener (1990b) used products such as a microwave oven, Delener (1994) used an automobile, Rodriguez (1993), Bailey and Sood (1993) and Sood and Nasu (1995) used an expensive radio set while Essoo and Dibb (2004) used a television set.

In this study, the apparel shopping context was selected since consumption of this product is made irrespective of cultural backgrounds. It is believed that the apparel product category manifests one's ethnic identity because of its highly visibility (Jain 1989). This shopping product is also the most appropriate for a study of retail patronage behaviour (e.g. Shim and Kotsiopoulos 1992a, 1992b; 1993; Zain and Jabri 1996). Hence, if the influence of religious factors on shopping and patronage process can be identified, it would not be illogical for us to assume that similar effects are at work in producing the same behaviour for other consumer products. This assumption would need to be tested in the future.

5.3.3 Composition of the Questionnaire

The survey instrument is a close-ended questionnaire. A covering letter with a university logo is placed in the first page of the questionnaire to explain the purpose of the study and to request the respondent's co-operation regarding the interview. In arranging the questionnaire, related questions were grouped together within the construct. This seemed logical, as it enabled easier variable connection for data analysis and was simpler for participants to have one question flow to another (Foddy 1993). Many researchers agree with the recommendation that the questionnaire should begin with questions that reflect the major theme of the study and end with specific demographic ones. Demographic questions are considered easier to answer and therefore putting them at the end of a questionnaire will allow participants to answer the least difficult questions when they are most fatigued and bored with the survey session. The questionnaire consists of seven sections and is summarised in Table 5.5.

Table 5.5 Structure of the questionnaire

Section	Variables	No. of items	Scale	Main source
A	Religiosity Strength of religious affiliation	10	5-point Likert-type	Worthington et al. (2003)
		1	6-point scale	
B	Lifestyle	14	5-point Likert-type	Md. Zain and Jabri (1996)
C	Shopping orientation	26	5-point Likert-type	Shamdasani, Hean and Lee (2001)
D	Importance of store attributes	12	5-point Likert-type	Erdem, Oumlil and Tuncalp (1999)
E	Information sources	7	5-point Likert-type	Eckman, Kotsiopulos and Bickle (1997)
F	Patronage behaviour	2	5-point Likert type Categorical format	Eckman et al. (1999), Jantan and Kamaruddin (1999)
G	Demographics	7	Categorical format (multiple choice)	Author

5.3.3.1 Religion

A review of the related literature reveals that religious constructs have generally been operationalised by researcher designed items or by behavioural measures. As a result of the literature review, two facets of religious conceptualisation have been identified: religious affiliation and religiosity. In this study, religion will be conceptualised from

these two perspectives. Both conceptualisations are appropriate for consumer behaviour research given the fact that religious affiliation is only useful as a predictor variable to assess the existence of differences between two or more religious groups but not within a specific religious group. Further, although classification based on religious affiliation enjoys the advantage of objectivity, it suffers a limitation as one may or may not identify oneself strongly with one's religiosity.

Religious affiliation

Religious affiliation concerns the specific type of religious community into which an individual is integrated (Ellison, Gay and Glass 1989) and research substantiates the relevance of the dimension in affecting behaviour (Hirschman 1981, 1982a, 1982b, 1983; Bailey and Sood 1993).

Religious affiliation was measured by asking respondents about the religions with which they identified (Muslim, Buddhist, Hindu, Christian or Other). This approach is regarded as "emic" in nature, that is, it allowed the respondent to label themselves and to ensure that those who were "born into" a particular religious tradition but no longer felt tied to it were not judgementally labelled by the researcher (Hirschman 1982a). This method of measuring religious affiliation is the approach deemed most appropriate by cross-cultural behavioural researchers, and especially those in cultural anthropology and sub-cultural psychology.

Religiosity

Traditionally religiosity has been conceptualised as a unidimensional construct with church attendance and denomination being the primary measure (Bergan 2001).

Though this unitary measure may be simple in terms of cost validity and remains a frequently used measure within the literature (e.g. Schwartz and Huismans 1995), many researchers argued that frequent use does not make such a unidimensional assessment an acceptable research practice. As Bergan (2001) very aptly pointed out, the reliance on religious attendance as a sole measure of religiosity may be insufficient and lead to incorrect conclusions. In fact, the unidimensional view of the nature of religiosity gives rise to one major concern that relates to the difficulty in equating greater attendance of worship in congregation and increased religious commitment. A person may attend prayers in congregation for several reasons, for example, to avoid social isolation, to please their colleagues, or it can be a form of prestigious action to dominate over others. Thus we cannot say that those who are high in religious practice are high in religiosity because this practice could be a routine action more than devotional.

The recognition of the multidimensional nature of religiosity allows for a more thorough understanding of the potential importance of different dimensions or forms of religiosity. Psychometric research conducted in the area of psychology has successfully produced a plethora of scales to measure a wide variety of religious phenomena including attitudes, beliefs and values (Hill and Hood 1999). Most research has focused upon indices of intrinsic (religion as an end), extrinsic (religion as a means) and quest (religion as a search) dimensions of religiosity. However, there is no consensus among experts as to the number of dimensions that make up the religiosity construct. Religiosity is an intricate concept and a variegated human phenomenon, and seems to cover considerable ground such as behaviours, attitudes, beliefs, feelings and experiences. Religious scholars and sociologists do not agree on

whether adequate measures of individual religiosity can be developed and therefore such measures are subjectively devised by researchers to fit their research objectives. Thus, the content and number of religious dimensions vary considerably and may depend on the nature of the research, purpose and context.

Consistent with the previous studies, this study operationalises religiosity as a multidimensional concept. It is believed that the use of a multi-item measurement of religiosity provides a better understanding of its true nature and “may achieve high validity at the cost of sheer impracticality for almost all consumer research” (Wilkes et al. 1986, p. 49). The operationalisation of religiosity as a multidimensional concept would also be consistent with those in the areas of psychology (e.g. Worthington et al. 2003; King and Crowther 2004) and consumer behaviour research (Wilkes et al. 1986; Delener 1990a, 1990b, 1994; LaBarbera and Stern 1990; McDaniel and Burnett 1990; Sood and Nasu 1995; Siguaw and Simpson 1997; Essoo and Dibb 2004).

There are a vast number of existing measures of religiosity created and/or used in psychology research. In their edited book on religious instruments, Hill and Hood (1999) compiled 125 measures of religiosity and spirituality. Choosing an appropriate measure to use in the present study was a most difficult task since the majority of the existing measures were designed from a Christian perspective and developed with Christian or Judeo-Christian subjects. Non-Judeo focused measures are so scarce, such that the researcher felt compelled to review as many as reasonably possible and evaluate its appropriateness to the present study. Thus, having comprehensively reviewed and evaluated the properties of existing measures, the Religious Commitment Inventory (RCI-10) has been identified as the most appropriate measure of religiosity for purposes of this study. The measure was developed in counselling

psychology by Worthington et al. (2003) based on earlier 62-item (Sandage 1999), 20-item (Morrow, Worthington and McCullough 1993; McCullough and Worthington 1995) and 17-item (McCullough, Worthington, Maxie and Rachal 1997) versions. Worthington et al. (2003) found that scores on the RCI-10 had strong estimated internal consistency, 3-week and 5-month test-retest reliability, construct validity and discriminant validity.

The RCI-10 measures motivational and behavioural commitment to a religious value system, irrespective of the content of beliefs in that faith system and has been validated across different samples (Worthington et al. 2003). It skilfully avoids sectarian language often utilising terms such as “my faith” and “my religious group” and is appropriate for use across most faiths. Importantly, unlike most other measures of religiosity, the RCI-10 does not delve directly into the potentially sensitive and contentious theological religious realm, thus it eliminates any possibility of offending participants or provoking their sensitivity, particularly religious respondents. This scale is relatively shorter than other measures, composing ten 5-point Likert-type statements ranging from 1 (“not at all true of me”) to 5 (“totally true of me”) with six statements expressing intrapersonal religiosity (cognitive) and four expressing interpersonal religiosity (behavioural). The cognitive dimension focuses on the individual’s belief or personal religious experience while the behavioural dimension concerns the level activity in organised religious activities. These two dimensions of religiosity appear theoretically sound and empirically substantiated and investigations into religiosity effects must consider both factors. Individuals may perceive themselves to be highly religious (cognitive component) but for whatever reason, are not behaviourally expressive in their religious beliefs, e.g. they do not attend church, tithe and so forth (behavioral component) or they may be motivated to give generously of their time and

money to organised religion by appeals to their need for prestige and social appearances while not ascribing strongly to religious precepts (Chuchinprakarn, Greer and Wagner 1998).

5.3.3.2 Lifestyle

Three lifestyle dimensions described as traditional conscious, innovativeness and ethnicity conscious were included in the questionnaire. These dimensions of lifestyle were chosen in view of the cultural richness of the region. This region is also experiencing a rapid economic growth and urbanisation which could undermine the tranquillity of its traditional culture. Fourteen items adopted from Md. Zain and Jabri (1996) were used to measure the lifestyle variables of the respondents. Respondents were asked to indicate their degree of agreement or disagreement with each statement on 5-point Likert scale, ranging from strongly disagree (1) to strongly agree (5).

5.3.3.3 Shopping Orientations

Twenty-six items of shopping orientations were included in the questionnaire, obtained from Shamdasani, Hean and Lee (2001) which was validated with a Singaporean sample. This was chosen over other inventories because of its relevancy to the Singaporean sample which is thought of as valid to represent the general characteristics of consumers in an Asian environment. More importantly, both Malaysian and Singaporean consumers sharing many similarities in terms of socio-demographic compositions, making this inventory to be more applicable for the present study. A 5-point Likert scale was used to measure the shopping orientation of respondents, ranging from strongly disagree (1) to strongly agree (5). Care was taken

to ensure that the shopping orientation scale had a mix of both positive and negative statements so as to avoid the “yea-saying” tendency.

5.3.3.4 Importance of Store Attributes

Importance of store attributes were measured using twelve items mostly adopted from Erdem, Oumlil and Tuncalp (1999). Respondents were asked to indicate how important each of the twelve store attributes were to them in deciding where to shop for their clothing. The responses were given on a 5-point Likert-type scale ranging from “not important at all” (1) to “very important” (5), an approach consistent with other multi-attribute attitude research as applied in retailing contexts. The following is a list of the store attributes used in this study: reputation of store, brand carried by store, helpfulness of salespersons, class of clientele, reputation for fashion, physical attractiveness of store, special sales or promotions, merchandise display, variety of selection, merchandise prices, quality of merchandise and proximity of location. A limited set of attributes is more appropriate considering that consumers would have trouble in evaluating too many attributes, as the literature on processing capacity suggested (cf. Erdem et al. 1999).

5.3.3.5 Information Sources

Information sources, such as print publications (magazine/newspaper), commercial broadcast (television) and personal influences (family/friends) are generally used to ascertain information about merchandise. Seven items with a 5-point Likert-type scale ranging from never (1) to always (5) were used to measure how frequently consumers used the following sources of information when selecting a store to buy clothes: (i)

television advertising, (ii) catalogues/brochures, (iii) magazine advertising, (iv) newspaper advertising, (v) friend's opinion, (vi) family opinion's and (vii) salesperson advice. These items were adapted from Eckman et al. (1997).

5.3.3.6 Patronage Behaviour

Respondents' patronage behaviour was measured using two questions based on Lee, Fairhurst and Dillard (2002) and Jantan and Kamaruddin (1999). For the first question, respondents were asked the following question: "How often do you shop at the following types of stores for clothing within the past twelve months?" A 5-point Likert-type scale was used for this measurement, ranging from never (1) to very often (5). Examples of stores were given for each store type. The second question is a categorical format that requires the respondents to indicate the amount of their spending for all clothing purchased on each shopping trip. The categories included were: "Less than RM50", "RM51-RM100", "RM101-RM250", "RM251-RM400", "RM401-RM600" and "More than RM600".

5.3.3.7 Demographics

Since most demographic questions are perceived as personal and even threatening by at least some respondents (Dillon, Madden and Firtle 1990), they are asked at the end of the questionnaire. This final part of the questionnaire consisted of a fairly standard list of demographic and socio-economic questions with seven questions in total, including gender, age, marital status, educational attainment, work status, ethnicity, religious affiliation and household's monthly income, all of which have been noted as important variables in the examination of religious influences on consumer behaviour.

Marital status was classified as: “single”, “married” and “divorced/widowed”. Age groups included were: “21-25”, “26-30”, “31-35”, “36-40”, “41-45”, “46-50” and “51 or older”. For ethnicity, the three major ethnic groups considered were Malays, Chinese and Indians. The “Others” category was included to represent other minority ethnic groups. For education achievement, the categories included were: “Secondary school”, “Diploma”, “First degree” and “Masters degree and above”. Employment categories that were covered in the study included: “Self-employed”, “Public sector employee”, “Private sector employee” and “Housewife/retired/unemployed”. For household monthly income, income brackets of “Less than RM1,500”, “RM1,501-RM2,500” and so on were included with the highest bracket of “RM10,001 and above”.

For the sake of ease of completing the questionnaire, the response format used for all demographic variables was presented in categorical format, that is, the respondents were asked to tick in the box that is appropriate to them. In Malaysia, the common problem encountered in data collection is with respect to demographic details of the respondents. They are generally reluctant to reveal their age, hence age has to be classified into different age groups in order to encourage them to answer. Income is another sensitive question because the respondents would not like to divulge their financial status. With the method of personal interview adopted from the present study, a lot of effort had to be put in to get the respondents to respond. The tendency to under report their income is not surprising. However, the refusal to answer the income question will not affect responses to other questions since income is the last question asked in the questionnaire (Dillon et al. 1990).

5.3.4 Evaluation of the Measurements

A multi-item instrument should be evaluated for accuracy and applicability (Greenleaf 1992). The evaluation of the measurements used in this study involved the assessment of the validity and reliability of the instrument.

5.3.4.1 Validity

One criterion for evaluating the soundness of a research instrument is validity, the extent to which an empirical measure adequately reflects the real meaning of the concept under consideration. An assessment of validity would indicate how well a particular measure captures what it is designed to measure. It is important to point out that reliability and validity are closely related but they are not perfectly independent of one another. Reliability, although necessary for validity, is not in itself sufficient and can guarantee validity, and vice versa (Rose and Sullivan 1996; Hair et al. 1998). This means that a construct may be consistent (reliable) but not accurate (valid), or otherwise, it may be accurate but not consistent. A measuring instrument is considered to be valid if it does “what it is purported to measure” (Rust and Golombok 1999, p. 64). According to the description of validity given by Diamantopoulos and Schlegelmilch (1997, p. 33):

“The extent to which a particular measure is free from both systematic and random error indicates the validity of the measure; a perfectly valid measure implies $O=T$ (i.e. the measurement obtained reflects only the true score on the characteristic of interest).”

Validation of an instrument always demands empirical investigations, with the nature of the evidence required depending on the type of validity (Nunnally and Bernstein 1994). Several types of validation procedures are suggested in the social

science literature (Nunnally and Bernstein 1994; Diamantopoulos and Schlegelmilch 1997; Malhotra and Birks 1999; Rust and Golombok 1999; Zikmund 2000). Two types of validity are of applicable to this study: (1) content validity, the degree of correspondence between the items selected to constitute a summated scale and its conceptual definition and (2) construct validity, the ability of a measure to confirm a network of related hypotheses generated from a theory based on constructs.

Content validity

Sometimes called face validity, content validity is a judgemental evaluation of how well the content of a scale represents the measures. There is no statistical criterion for assessing the degree of content validity. The justification of the selection of item statements to be included in the sets of scale intended to measure a construct that is content valid is very much subjective in nature. In this connection, Zikmund (2000) recommended that the scale items should be reviewed by experts to examine whether they cover the entire domain of the construct being measured. When it appears evident to experts that the measure provides adequate coverage of the concept, a measure has content validity.

In this study, the content validity of the measurement instrument was assessed by asking a few experts to examine it and provide feedback for revision. The expert panel included active researchers in the area of consumer behaviour. After they reviewed the questionnaire, changes were made to clarify and eliminate ambiguous statements in instructions and questions according to their recommendations. In addition, during the translation and pilot test, each item statement was examined for its clarity and relevance to the purpose of the research, which resulted in some

modifications to the questions. Section 5.3.6 discusses in detail the pilot testing of the questionnaire.

Construct validity

Construct validity is the approach to validating a measure by determining what construct, concept or trait the instrument in fact measuring (Churchill 1995). There are two categories of content validity, both of which are of interest in this study: convergent validity and discriminant validity. Convergent validity refers to the degree to which the scale correlates in the direction with other measures of the same construct. In other words, the items show homogeneity within the same construct. Discriminant validity, on the other hand, refers to the extent to which a measure is distinct from other measures, that is, it shows heterogeneity between different constructs (Malhotra and Birks 1999).

Ideally, we expect to see an item to be related with each other items that measure the same constructs (convergent validity), but to differ from items which measure different constructs (discriminant validity). Both types of validity in this study are assessed by using factor analysis (section 7.2). Such analysis provides an empirical assessment of the relationships among items in a variable in forming the conceptual and empirical foundation of a summated scale.

5.3.4.2 Reliability

Measures of variables should have reliability in order to draw valid inferences from the research. When referring to a psychological test instrument such as a questionnaire, reliability has been described as “the attribute of consistency in

measurement” (Gregory 1996, p. 84). Gregory (1996, p. 84) describes reliability as “best viewed as a continuum ranging from minimal consistency of measurement (e.g. simple reaction time) to near perfect reliability of results (e.g. weight)”. According to Malhotra and Birks (1999, p. 305), systematic sources of error, because they “affect the measurement in a constant way and do not lead to inconsistency” do not have an adverse impact on reliability. However, random error would results in inconsistency and leads to lower reliability. Thus reliability is “the extent to which measures are free from random error” (Malhotra and Birks 1999, p. 305).

Mitchell (1996) discusses three main approaches for assessing reliability: test-retest, alternative forms and internal consistency methods. The test-retest approach involves the administration of identical sets of instruments on two different occasions to the same set of respondents under as nearly equivalent conditions as possible. A correlation coefficient is then computed to determine the degree of similarity between the two measurements - the higher the correlation coefficient, the higher the reliability. A perfectly reliable test would provide identical responses for all respondents on both test occasions. In such a situation, the correlating scores from the first administration with those of the second administration would find a perfect correlation ($r = 1.00$). Should the instrument be ‘perfectly unreliable’ respondents would have different scores on the first administration with respect to the second administration, and there would be no correlation between test scores ($r = 0.00$).

However, several problems are associated with this approach (Kinnear and Taylor 1996; Malhotra and Birks 1999). The first problem is the sensitivity of the method to the interval between testing - the longer the time interval between the measurements, the lower the reliability. The second problem is the influence of the

initial measurement on subjects' responses to the subsequent measurement - the subjects may have learned from the first interaction and may have altered the attitude under measurement. The third problem is the carry-over effect - the respondent may attempt to remember answers given during the first measurement. As a fourth problem, the situational factors may change, resulting in a change in the measurement. Finally, the logic and practicality of administering the same measurement to the same sample of respondents make this method a less dependable assessment of reliability.

The alternative-forms approach involves the same respondents measured at two different times with two equivalents, but not identical, instruments. The scores from the administration of two separate instruments are correlated to assess the reliability. However, this approach has two major problems. Firstly, it is difficult to construct two equivalent forms of the same instrument. Secondly, it is time consuming and expensive to construct an equivalent version of the instrument. In the case of the present study, even if it is possible to allocate the time and resources to construct two equivalent instruments, it is very difficult to ensure the equivalence in content of the two separate versions. Therefore, a low correlation may have reflected either an unreliable or simply non-equivalent forms (Mitchell 1996).

The third approach, internal consistency reliability, "is used to assess the reliability of a summated scale where several items are summed to form a total score" (Malhotra and Birks 1999, p. 306). Forza (2002) noted that "the internal consistency method uses various algorithms to estimate the reliability of a measure from measure administration at one point in time" (p. 177). The assumption behind this approach is that the items of a measure work together as a set and should be capable of independently measuring the same construct. The items should be consistent in what

they indicate about the concept being measured.

The simplest measure of internal consistency of an instrument that is presented to respondents only once is split-half reliability. In this approach, the multi-item instrument is split into two equivalent halves, and the scores for respondents on one half are correlated with those scores on the second half of the instrument. Although commonly used in academic literature in marketing, the procedure is problematic because the results depend on how the items are divided. A well-used approach to overcoming this problem is the use of Cronbach's alpha. Cronbach's alpha (also referred to as the coefficient alpha) is the average of all possible split-half coefficients resulting from the different ways of splitting the instrument items (Cronbach 1990). An important property of Cronbach's alpha is that its value increases with an increase in the number of measurement items. The inclusion of redundant items may superficially inflate the value of Cronbach's alpha (Peterson 1994). Despite this reservation however, Cronbach's alpha is referred to as one of the most important deductions from the theory of measurement error (Nunnally and Bernstein 1994).

Cronbach's alpha is a reasonable indicator of the internal consistency of instruments that do not have right-wrong (binary) marking schemes, thus can be used for both essay questions as well as questionnaires using scales such as rating or Likert (Oppenheim 1993). This is the method that is employed in this study to assess the reliability of several items in their index form. Measuring reliability this way is appropriate for consumer behaviour research and has been used by several researchers (e.g. Delener 1994; LaBarbera and Gurhan 1997; Essoo and Dibb 2004). The general formulae for computation of Cronbach's coefficient alpha can be shown as follows:

$$\alpha = \frac{N}{N-1} \left[1 - \frac{\sum_{i=1}^N S_i^2}{S_x^2} \right]$$

Where: N is the number of questions (or identifiable parts of an essay question); S_i^2 is the variance of individual questions (or parts); and S_x^2 is the variance of the whole test (Black 1999).

The value of α can range from 0 to 1. The nearer the value of α to 1, the better the reliability. However, the level of acceptable reliability is a contentious issue. Kerlinger and Lee (2000) suggest that, in some cases, a reliability value of 0.5 to 0.6 is acceptable. Hair et al. (1998) on the other hand suggest that a reliability level between 0.6 and 0.7 represent the lower limit of acceptability for exploratory research. Hinkin et al. (1997) however were content with a reliability coefficient of 0.7 and above, for which they considered this level as “an indication of strong item covariance or homogeneity and suggests that the sampling domain has adequately been captured” (p. 113). Similarly, according to Nunnally and Bernstein (1994, p. 264-265):

“A satisfactory level of reliability depends on how a measure is being used. In the early stages of predictive or construct validation research, time and energy can be saved using instruments that have only modest reliability, e.g., .70 ... It can be argued that increasing reliabilities much beyond .80 in basic research is often wasteful of time and money”.

In his meta-analysis, Peterson (1994) found that average reported alpha coefficients in behavioral research ranged from 0.7 for values and beliefs to 0.8 for job satisfaction. He however remarks that none of the recommendations have an empirical basis, a theoretical basis, or an analytical basis, but rather reflect “experience” or intuition. In spite of that, it is generally agreed that a reliability level of below 0.6 is

unacceptable (Hair et al. 1998; Malhotra and Birks 1999). Therefore, in this study, an alpha value of 0.6 was set as a cut-off point for the acceptance of the measure. If the deletion of a particular statement helped to substantially improve a coefficient alpha, then that statement was dropped.

5.3.5 Translation Procedure

The original questions were drafted in English, since most of the items were adopted from previous inventories, which were originally produced in English language. However, bearing in mind the multicultural nature of the target respondents, it was decided that the questionnaire should be prepared in a bilingual version (English and Malay) because not all of the population are competent in English. Furthermore, it was envisaged that a questionnaire in the bilingual language would improve the response rate, since respondents were normally comfortable reading or listening to the language that they can easily understand.

The survey form in the Malay language was intended for Malay respondents. Malay language is the native language of the predominant Malays and has become the official language of Malaysia since its independence in 1957. It is widely spoken and understood by most residents of the country. English, on the other hand, has been unofficially recognised as Malaysia's secondary language. During the colonial era and post-independence, English had been the language of higher education and today it remains the language of international commerce. Thus it is viewed as an alternative for those who are not fluent in Malay. Ethnic groups for whom Malay language is not their first language (the urban Chinese and Indians, most frequently) are very likely to have a good command in English.

The researcher elected to exclude other languages (i.e. Chinese Mandarin and Tamil) for practical reasons, to wit, the fact that the translation process from English to Chinese Mandarin or Tamil would be much more difficult and time consuming as compared to Malay language. Furthermore, the field assistants at the researcher's disposal were themselves Malays who are considerably proficient in Malay and English but not generally in other languages. Obtaining field assistants who were also fluent in Mandarin Chinese, for example, would be costly, more time consuming and would not in the researcher's opinion to contribute significantly to the success of the field survey.

Three main translation procedures can be distinguished: direct translation, back translation and parallel translation. As back translation is the most commonly used translation procedure (Malhotra and Birks 1999), this procedure was applied by the researcher. Mullen (1995) states "to establish translation equivalence, researchers should have the original instrument translated to a target language by a bilingual person and back-translated to the original language by another bilingual person" (p. 575). This procedure allowed the researcher to identify and correct possible discrepancies that arose in the meaning between the original and retranslated questionnaires. The back-to-back translation task was carried out by a panel of three experts with post-graduate level qualifications which includes two English lecturers and a lecturer of Malay linguistic at the University College of Science and Technology, Malaysia. The procedure involved a two-phase process. The questionnaire was firstly translated into Malay by the first translator and then back-translated into English by the second translator. Conceptual rather than literal meaning was the goal. This procedure resulted in an initial Malay translation and an English

back-translation which could be compared with the original English version to assess the effectiveness of the translation process and how closely the initial version matches the translated version.

The researcher then met with the translation team to discuss the differences found in the back-translation. Items that yield different responses were studied and the problems examined. There were a number of instances where clarification of the original meaning of the English terms used in the questionnaire was required. Some statements and terms were modified to improve the translation. To further improve the reliability of the translation, the resulting bilingual version of the questionnaire was then circulated to the bilingual faculty members at the same university, requesting their appraisal of the quality and appropriateness of the translation. This was deemed necessary because the major concern is on the cross-comparability of both English and Malay versions. Based on the descriptive and the subjects' comments, some minor adjustments were made.

5.3.6 Piloting the Questionnaire

Having established the cross-equivalency of concept and linguistic between English and Malay versions of the questionnaire, the discussion now turns to the question of the means to improve the clarity of questions. For this purpose, pilot testing of the questionnaire was conducted to validate the items and the whole scale. This is because a vast number of the measurement items that form the questionnaire were adopted from past studies and because some adjustments have been made for the purpose of translation equivalency in both versions. Sommer and Sommer (1991) state that “the impressive economy of the questionnaire is partially offset by the researcher’s

inability to clarify the meaning of terms” (p. 138). Thus pilot testing can be regarded as the final step toward the improvement of survey results.

Pilot testing a questionnaire consists of trying it out on a small sample of persons having characteristics as similar as possible to those who will be included in the actual survey (Reynolds et al. 1993). The main reason for conducting a pilot test is to determine the potential effectiveness of the questionnaire and whether further revision is needed prior to conducting the survey. In addition, the pilot study was conducted to ensure the validity, sequence and relevance of the questionnaire to this study. It should be noted that the test was not used for statistical purposes and therefore responses from the pilot test were not included in the research findings.

Consistent with researcher recommendations, a pre-testing of both English and Malay versions of the questionnaire was conducted by personal interview to ensure that the researcher could directly observe respondent behaviours (Churchill 1995). The pilot test was done in Malaysia with thirty participants, ages 21 and above, conveniently selected from the researcher’s local area. During this session, the participants were briefed with the purpose, layout and content of the survey. Participants were encouraged to be very free with their responses, make suggestions for improvement and delineate any difficulties they found. After each questionnaire was completed, each participant was asked what he (or she) meant in checking various answers. Comments were solicited on the clarity of the questions and what the changes should be done in order to make the questions simpler. These respondents also gave their comments on understanding the instructions about the scaling and the time taken to answer the questions.

The whole interview takes about 20 minutes. The test found no serious

problems and minor amendments were made to the survey questions based on the verbal feedback received from the interview. The final result of the pilot test finally indicated that the questions had face validity. A final version of a questionnaire was then prepared and this is used as an instrument distributed to the actual respondents (see Appendix C for a copy of survey questionnaire in English and Malay).

5.4 Sampling Process

Sampling is a process of selecting a sufficient number of elements from the population so that by studying the sample, and understanding the properties or the characteristics of the sample subjects, the researcher will be able to generalise the properties or characteristics to the population elements. Sampling overcomes the difficulties of collecting data from the entire population which can be impossible or prohibitive in terms of time, costs and other human resources (Forza 2002). In this section, the sampling process will be discussed in four aspects as follows: (1) defining the target population, (2) determining the sample size, (3) sampling procedure and (4) sources of sampling errors.

5.4.1 Target Population

The first step in selecting a sample is to identify the population from which the sample is to be selected. The basic principle of sampling is that by selecting some of the elements in a population, a researcher may draw conclusions about the entire population. According to Fink (1995, p. 1):

“A sample is a portion or a subset of a larger group called a population. The population is the universe to be sampled. ... A good sample is a miniature version of the population - just like it, only smaller.”

It is therefore important that the sample characteristics will be the same as those of the population. This is because in any research, results will refer to that defined population and to none other. In this study, population is defined as the totality of cases that can form to the designated specifications. These specifications define the elements that belong to the target group and those that are to be excluded. In sampling, the population is the aggregate of items (e.g. peoples, addresses) from which the sample is to be taken.

Kuala Lumpur was selected for the sampling purpose because of its relatively greater affluence and population density, which in 1991 had a population of 4,746.7 per square kilometres. As a capital city, Kuala Lumpur is the most developed region in Peninsular Malaysia, having up-to-date and modern amenities and infrastructure compared to other parts of the country. It could be conceived that this area is the place where most of the new ideas or innovations take place. From there these new ideas are being diffused to other parts of the country.

Demographically, although the distribution of ethnic group is somewhat different in Kuala Lumpur to nationally, the characteristics of ethnic group in Kuala Lumpur closely resemble the national population. The Bumiputra (mainly Malay-Muslims) and Chinese are equally represented in Kuala Lumpur with the former constitutes 40.7 percent and the latter 40.6 percent of the total population. Only a small number of Indians live in Kuala Lumpur which constitutes 4.8 percent of the total population. In comparison, the ethnic distribution of national population (based

on the Population Census 2000) consists of 65.1 percent Bumiputra, 26% Chinese and 7.7 percent Indians (Malaysian Department of Statistics 2001).

At first, it was decided that the subject must be above 18 years old. However, after considering those respondents with university-level education, the cut-off age level was set at 21 years old. This is based on the fact that, in Malaysia, the duration of formal education is eleven years, which begins at the age of seven. The university level education normally takes at least four years to be completed. Thus, those who are 21 years old and below do not, generally speaking, earn income which means that they have limited purchasing power.

5.4.2 Sample Size

Having defined the population of interest, the next concern is to determine the required sample size for this study. According to Forza (2002), determining sample size is a complex issue which is linked to the significance level and the statistical power of the test, and also to the size of the researched relationship (for example association strength or amount of difference). However, Burns (2000) and May (2001) are of the opinion that sample size is not necessarily the most important consideration when designing a survey. In fact, quantitative research does not always mean involving very large samples. While a large sample size would give a better accuracy in the findings (Kumar 1999; Burns 2000), it also increases the probability of committing non-sampling errors such as errors in administering the data collection.

Although there are a number of statistical formulas could be used to calculate the optimal sample size, from a practical point of view, they are not that easy for straightforward application. For instance, in order to calculate the sample size,

estimates of standard deviation of the sample for each variable have to be made and such estimates should be based on similar studies done previously. According to Kinnear and Taylor (1996, p. 443):

“The troublesome thing about our calculations of required sample size is that we need a value of s [standard deviation] for absolute precision and a value of s/X or relative precision. If we do have these values, in all likelihood we already know what we want to know about a particular variable There is no one sample size that is statistically optimal for any study.”

Clearly, determining the sample size for a given research situation is a complex task and it depends on various qualitative and quantitative considerations (Sekaran 1992; Bryman 2001; de Vaus 2002). In this study, an ad hoc method was used to determine the required sample size. The following considerations have to be taken into account: statistical requirement, time constraint, financial capability and data collection method.

In order for the researcher to be able to form a general picture of the overall population, the degree of precision, accuracy and the representativeness of the samples have to be taken into consideration. Kinnear and Taylor (1996) suggest that the only way to assure the required precision of sample size would be to select the largest sample. In this way, the variable requiring the largest sample size would reach its specified precision and all the others would also have tighter precision than specified. This is because the precision of the result depends on how large a standard error can be tolerated. Theoretically, a larger sample size would provide a smaller standard error and thus would give higher precision of the result. According to Sekaran (1992) however, “too large a sample size (say, over 500), could also become a problem inasmuch as we prone to committing Type II errors” (p. 252). In other words, large

sample sizes included in the analysis would enhance statistical power and lend some credence to statistically insignificant results (Siu, Dickinson and Lee 2000, p. 251).

The time constraint could also be a limiting factor in determining the sample size. Obviously, a large sample size would take a longer time to complete. In this study, the time period allotted for the data collection to complete is no more than three months, as approved by the researcher's financial sponsor. This period is too short to use anything except a small sample size. In addition, survey research, especially the fieldwork involving interviews, could be very expensive. Obviously, a larger sample size would require a substantial financial allocation. As for this study, only a limited amount of financial resource is available and this obviously limits the sample size.

Finally, the way of how the survey is conducted would jointly determine the size of the sample. In this study, personal interviews were undertaken by the researcher with the help of two field assistants and thus, a small sample is more appropriate. As a rough guide, Denscombe (1998) suggests a sample size in a range of 30 to 250 as appropriate for a small scale study. A sample size exceeding 500 is considered to too large, however, because it can increase the power of statistical test and results in detecting almost any difference even a very small magnitude to research significance (Huck and Cormier 1996).

Tull and Hawkins (1990) provide a typical sample size for the studies of human and institutional populations as shown in Table 5.6. This can be used as an aid in deciding what size of sample to take for this study. According to the authors, depending upon the number of subgroup analyses to be run, national studies of individuals or households had samples ranging in size from 1,000 to 2,500 or more and regional studies had samples of 200 to 1,000 or more.

Table 5.6 Typical sample size for studies of human and institutional populations

Number of Subgroup Analyses	People or households		Institutions	
	National	Regional	National	Regional
None or few	1,000 - 1,500	200 - 500	200 - 500	50 - 200
Average	1,500 - 2,500	500 - 1,000	500 - 1,000	200 - 1,000
Many	2,500 +	1,000 +	1,000 +	1,000 +

Source: Tull and Hawkins (1990, p. 493)

After considering the above factors, it was determined that a sample of three hundred respondents would allow the appropriate analysis to be undertaken. By this size, the sampling error that the researcher is willing to tolerate is five percent (de Vaus 2002). The next section discusses the selection of sample.

5.4.3 Sample Selection

To have a representative finding, the sampling technique used must be objective. This is an important attempt adopted by most researchers in order to provide a finding applicable to the general. There are many types of samples but all samples are either probability (often called random samples) or non-probability. Grouped under probability sampling techniques are simple random sampling, systematic sampling, stratified sampling and cluster sampling, area sampling and double sampling. For non-probability sampling techniques, there are convenience sampling, judgemental sampling and quota sampling (Sekaran 1992; Neuman 1994; Churchill 1995; Kinnear and Taylor 1996).

The sampling method used to select the respondents is a three-stage area

sampling where clusters are formed on the basis of geographic locations of the population units. The three-stage area sampling involves the following steps (Kinnear and Taylor 1996):

- segment a total geographic area of interest (e.g. city or state) into sub-areas (e.g. countries or districts);
- select a few of the sub-areas randomly; and
- study a sample of units randomly selected from each sub-area.

For the first stage, the study area, which is the Federal Territory of Kuala Lumpur, is divided into 14 areas based on the planning units of the city. From these 14 units, five planning units were selected for undertaking the survey. The planning units were Jinjang, Setapak, Wangsa Maju, Damansara and Seputih.

In the second stage, the selection of the housing areas in each planning unit was made. The researcher relied on “Senarai Taman-Taman Perumahan” supplied by the City Hall of Kuala Lumpur (DBKL) to provide a frame so that survey site could be selected. This source provided a list of housing areas according to planning units in the Kuala Lumpur area. The selection of housing areas was based on the researcher’s subjective judgement of the general appearance and reputation of the neighbourhood as well as the heterogeneity of the population in those areas. Care was taken to ensure that the ethnic and religious compositions of the sample were reflective of the population composition of Kuala Lumpur. The types of dwelling units (detached houses, semi-detached and linked houses) serve as an estimate of socio-economic background. This procedure would ensure that dwelling areas of different classes were represented in the samples. Five residential estates have been identified as survey sites. They were:

1. Taman Kepong (representing population from Jinjang)
2. Taman Sri Setapak (representing population from Setapak)
3. Taman Sri Rampai (representing population from Wangsa Maju)
4. Bukit Bandaraya (representing population from Damansara)
5. Taman Desa (representing population from Seputih)

The final step involves the selection of the residential units. The random procedures as recommended by Kinnear and Taylor (1996) were used as a basis for ensuring random selection. A three-step sample selection process was adopted. The first step involved the numbering of all streets and roads in the identified residential areas. The second step was the selection of streets and roads that corresponded with the two digit random numbers read horizontally from the table. The third step of the sample selection process was the selection of households on these streets. The residential units that corresponded with the two digit random numbers (now read vertically) from the table were selected as the target for the interviews.

5.4.4 Sources of Sampling Error

It is believed that the usefulness of the data collected and the analysis for this study will depend on the overall quality of the sampling design. Sampling and non-sampling errors may occur during the data collection and these will have an influence on the various stages in the later process. Thus it is important at this stage to formally remark some potential errors during data collection as a precaution when interpreting the results.

Most of the individuals who were approached personally by the interviewers and asked to participate in the study agreed to give their cooperation. However, some

potential sources of bias within this sample existed during data collection and most of which were not under the control of the researcher. First, those who agree to participate in the study but had a limited time available for interviewing session. Secondly, non-response errors were occurred due to the unavailability of target respondents at home. Thirdly, some target individuals totally refused to co-operate, especially those who are living within elite residential areas. This high social class group is not completely absent from the sample but is probably under represented.

Although such limitations should certainly be considered in interpretation of the results, this sampling error should not in any way influence the findings or their value since overall purpose of the study was explanatory generalisation (i.e. to analyse relationships existing between variables) in contrast to descriptive generalisation, which seeks to provide accurate generalisations of a population's characteristics. Although descriptive generalisations are directly affected by the representativeness of the sample, explanatory inferences are not (Babbie 1982, p. 122-123).

5.5 Survey Procedure

Having designed the sampling procedure, the discussion moves on how the survey was conducted. This is the phase where the researcher makes contact with the respondents, administer the data collection instrument, record the data and return the data for processing. This section will firstly discuss several important aspects in planning the fieldwork, followed by its implementation and problems encountered during the survey period.

5.5.1 Planning the Field Operation

The success survey fieldwork is very much depends on how the field operation is carefully planned. There are three important aspects of fieldwork management to be discussed here, which are: (a) time schedule, (b) budget and (c) personnel. Firstly, it is particularly important to establish a timeframe for the field survey to be undertaken. This will provide the researcher's with a framework specifying when the field survey is to begin and it will be ended. For this study, the researcher anticipated that the survey should be completed within three months.

Secondly, because there was no financial assistance allocated by the researcher's sponsor for the purpose of the survey, and obtaining such funding seems impossible; the researcher had no choice but to bear all expenses incurred during the fieldwork. The activities that involved a substantial amount of money were travelling expenses and allowance for field assistants. Cost was also incurred for providing them with survey stationeries and sets of questionnaire. A total of 350 copies of questionnaires were printed for the survey fieldwork.

Two undergraduate students from one local university were engaged and trained as field assistants to help the researcher in collecting the data. They were paid at a rate of RM5.00 per completed questionnaire. These students were in their second year undergraduate studies. A three-hour briefing session was conducted by the researcher for the field assistants and was compulsory. The purpose of this session was to ensure that each field assistant really understood each question and statement in the questionnaire, and the procedures of the data collection. Topics covered various aspects of the fieldwork, including the whole purpose of the survey, guidelines of how to approach the subject; understanding the questionnaire; recording responses and

assigning of areas to field assistants. Field assistants were also reminded about the etiquette when approaching potential respondents. They were told to introduce themselves in the manner outlined on the first page of the questionnaire. As they were to interview only subjects who bought their own clothing, the first question to ask was, “who buys your clothes?” Another qualifying criterion for inclusion in this study was age. The flow chart (Appendix D) was used as a guide for field assistants on how to choose their subjects.

5.5.2 Implementation of Field Survey

The fieldwork survey period stretched over two months from August 2003 to early October 2003. A letter was prepared for the target subjects informing them that field assistants would be visiting their homes to conduct an interview. The objective of the letter was to facilitate access to the target subjects. The frequent nuisance of visits by salespersons has made residents cautious of answering unexpected door knocks. The field assistants were therefore told to deliver the letter to the targeted subjects’ homes two or three days before their visits. The letter was written in both English and Malay languages (refer to Appendix B for a copy of the letter).

A personal interviewing technique was undertaken in the fieldwork survey where there is a personal interface between the interviewer and respondents. The surveys were conducted at varying times: after 6.00 pm on weekdays, after 2.00 pm on Saturday and after 10.00 am on Sundays to ensure that there was a fair chance of interviewing working individuals. It is anticipated that this procedure should avoid getting high proportion of housewives and retired persons as respondents. The “Guide to Approach the Subject” was used for this purpose (Appendix D). Although the study

aims to examine the presence of religious influences, the initial question avoided any reference to them. This aimed not to prejudice the individual's perceptions. Instead, whoever answered the door and qualified by the first two questions, "Who buys your clothes?" and "Are you 21 years old and older?" would be selected subject for the interview.

The process started with the field assistants introduced themselves as representatives of a research student from Stirling University who was doing a research on religiosity and retail patronage behaviour. A very important point that needs to be mentioned to the respondents was that the researcher obtained approval from the university before commencing interviews. The respondents were also assured that the study is conducted solely for academic purposes and all information obtained are treated as strictly confidential. It is common for most respondents to be sceptical about the survey initially, as they think that it might be a direct sales gimmick.

For those who agreed to participate in the survey, the questionnaire was handed up and explanations were given so to avoid bias and misinterpretation of the statements in the questionnaire. The respondents were shown the numbers (scales) and the assignment of each number to each category of option. This was clearly expressed because once they understood these rating scales, responding to the questions asked will be much better.

However, if the target individuals indicated a time constraint or that the time of the field assistant's visit was inconvenient, field assistants were instructed to make another appointment to return for interview at a future time, unless the individual indicated that he or she was not willing to participate in the study, before replacing it with the unit next door. If no one was home, the field assistants were instructed to

make another visit.

5.5.3 Problems in Conducting the Fieldwork

The survey which was carried out was not without its problems. At the early stage of the preparation of conducting the survey, there were problems of setting the sample frame. Since the Kuala Lumpur area was selected for the purpose of survey, the only reliable source on which the researcher can rely on was the residential lists maintained by the City Hall of Kuala Lumpur (DBKL). However, during that time, the Research and Information Management Unit (a unit under the Department of Planning) at the City Hall was under re-location to its new office and as such the officer in charge was unable to entertain and provide the required information. Only after the third visit to the City Hall was the lists of residential areas supplied but it was not as complete as expected.

One factor that was overlooked when planning the survey was the weather condition. After a dry spell in July, it started to rain almost every evening throughout the survey period. On three occasions, the survey had to be called off because of heavy rain. This caused considerable inconvenience to the field assistants. Additionally, getting access to some houses in some residential areas was another major problem. It is common to find houses in some residential areas in Kuala Lumpur that are totally fenced and sometimes it was almost impossible for the field assistants to talk to the household. Some of them were not very cooperative.

Finally, the researcher has observed from the fieldwork that differences exist between ethnic groups involved in terms of their attitude towards the survey. In general, the Malay respondents were the most cooperative of the three main ethnic

groups participating in this survey. In fact, some were hospitable and drinks were offered to the field assistants. However, a somewhat high proportion of co-operation refusal came from the non-Malay respondents and from the individuals living in the elite residential areas. One must bear in mind that the respondents did not receive any material benefit from this survey.

5.6 Ethical Considerations

This section deals with the ethical aspects of the study. A commitment to quality in research demands a commitment from the researcher to the highest ethical principles and values. Such values should inform the design of the study, selection of methodology, data collection, analysis and reporting (Sarantakos 1998). In addition, researchers are obliged to develop an appropriate ethical framework to inform the ‘practice’ of research, since many ethical issues and dilemmas which arise cannot be easily anticipated (Cooper and Emory 1995; Mason 2002).

The researcher is committed to achieving the highest possible ethical standards in this study, and affirms this commitment in the following discussion of ethical issues that inform this thesis. According to Cavan (in Cohen and Manion 1994, p. 359):

“Ethics is a matter of principled sensitivity to the rights of others. Being ethical limits the choices we can make in the pursuit of truth. Ethic says that while truth is good, respect for human dignity is better, even if, in the extreme case, the respect for human nature leaves one ignorant of human nature.”

In the spirit of the above philosophical position, four ethical commitments inform the study. The most fundamental ethical commitment relates to the need to receive the consent of all respondents and the disclosure of information. This involved supplying respondents with full information about the nature and character of the

study and offering respondents the opportunity to indicate their willingness of participation with the research project. Respondents were also informed of the methodology being used for the study and given an idea of the expected time required for the interview session. A copy of questionnaire was offered to those respondents who were interested to keep it in their possession. In addition, respondents were encouraged to contact the researcher at any time if they had further queries or issues that they would like to explore.

The second ethical commitment related to the need of paying attention to the issues of privacy and confidentiality when interviewing the respondents. In particular, ethical interviewing means that while respondents are encouraged to respond, they are not pressured to do so in an offensive way, their confidentiality is assured and they are protected from misrepresentation and exploitation (Zikmund 2000; de Vaus 2002). Of particular concern is the possibility of offending participants or provoking their sensitivity, particularly religious respondents, by the item content, especially when respondents are asked not to leave unanswered questions. It may be hard for a religious person to be forced into making decisions regarding something about religion that the respondent does not have a clear idea about. Moreover, it is very difficult to ask some questions that some respondent considers as personal things between him and his God.

In this study, respondents were advised of the purpose of the survey and encouraged to respond but they were not pressured, nor was the purpose of the study misrepresented to them in any way and their confidentiality was assured as the questionnaire confirms. They were not asked for their names and addresses, hence their anonymity was preserved. Moreover, respondents were stressed that the data

collected were only used for academic purposes and were not utilised in a manner the respondents would object (Sekaran 1992).

The third ethical commitment related to the need to be honest at all times with respondents. Honesty and integrity are essential for the development of rapport in interviews, and rapport is in turn essential for the development of cordiality which characterises effective interviews (Cohen and Manion 1994; Mason 2002). It was recognised that the development of rapport and a good relationship between the interviewers and respondents will ultimately benefited the research in terms of the quality of data collected.

The final ethical undertaking was that of the researcher's commitment to professionalism in the practice of research. One aspect of this is the question of the value of the research project (Miles and Huberman 1994). Thus, the outcome of this study is expected to contribute to the current body of knowledge and the practice of marketing. The researcher has endeavoured to undertake appropriate preparation such as attending a statistical methods course and writing research papers based on this study. Additionally, the researcher's own experience from conducting research at a master's level and co-authoring a number of journal articles and conference papers, both local and international, has equipped the researcher with a sensitivity of the ethical demands placed on research projects.

In brief, the researcher affirmed and continues to affirm a commitment to the fundamental ethical values associated with the rights of respondents and the responsibilities of the researcher.

5.7 Summary

Throughout, this chapter has provided discussion of the methodological approach to the study, which serves as the direction to fulfil the research objectives. Various considerations involved with the formulation of research design that applied a systematic approach to data collection. Each stage in research undertaking and its methodology has been described briefly, together with the procedures of collecting the required data.

The paradigm of the current research study tends toward the positivist approach and strictly a quantitatively-oriented one. A quantitative method was adopted in this thesis because it provides precision, reliability and testability. It also offers a high degree of generalisability of the findings from the sample to the population. Quantitative data can be measured more easily, patterns can be established more clearly and therefore any patterns, which are discovered, and generalisations made will be accurate since they are located within a large body of materials. The aim was to test a number of hypotheses that have been deduced from existing theory and research. A cross-sectional survey method was used to collect the primary data required in this study. This approach was employed because its findings can be quantified and more important is its scientific rigourness: specificity, parsimony and deterministic features.

A structured questionnaire was designed for use in the field survey. The initial development of the questionnaire was based on the conceptual model developed earlier which serves as a guide in identifying the desired information and specifying which relationship to be investigated. To ensure the validity of the findings from this study, the design of the questionnaire followed the principles of instrument design

developed within the academic community. This included a rigorous process of generating items from the literature and assessing their representativeness. This was followed by a translation process by a panel of language experts and later a pilot testing in order to clarify the questions and the appropriateness of the proposed scales.

The next chapter discusses the analytical procedures of data analysis, indicating the reason for its use, the technical approach followed and assumptions of each technique applied.

CHAPTER 6

METHOD OF DATA ANALYSIS

6.0 Introduction

In the previous chapter, the research methodology for the study was outlined. This chapter discusses the statistical techniques used in this study. The purpose is to provide some information on the statistical techniques used in this study. The chapter is organised as follows. First, the choice of statistical software for this study is discussed followed by an overview of the factors that influence the choice of statistical techniques. Presented next is the procedures of statistical techniques used to analyse the survey data, organised under univariate (descriptive statistics), bivariate (ANOVA) and multivariate (exploratory factor analysis, multivariate ANOVA and multiple linear regression) analyses. The assumptions of each technique applied will also be highlighted.

6.1 Choice of a Statistical Package

The effectiveness and efficiency of statistical data analysis have been greatly enhanced by the availability of excellent computer packages. Typical statistical software, among others, includes the Statistical Analysis System (SAS), BMDP, the Statistical Package for the Social Science (SPSS), Systat and Minitab. Statistical programmes within these packages do not completely overlap and some problems are better handled through one package than other. These programmes are continually

being updated although not all improvements are immediately implemented at each facility.

In this study, Statistical Package for the Social Science (SPSS) version 11.5 for Windows (2003) has been chosen as the computer programme for data analysis. SPSS is a sophisticated software used by the social scientists and other professionals for statistical analysis. SPSS provides a large array for programmes for univariate, bivariate and multivariate statistical analysis (Green and Salkind 2003). SPSS has been considered as the most widely available and generally used comprehensive statistical computer package available for marketing research (Malhotra and Birks 1999; Zikmund 2000), and for this reason it has been chosen by the researcher as a statistical programme for data analysis in this study.

6.2 Choice of Statistical Techniques

There is a bewildering variety of statistical tests for almost every purpose. To pick an appropriate test from all those available, a number of factors must be taken into consideration. The major considerations that influence the choice of test includes the objectives of the analysis, focus of the analysis, sample type and size, parametric versus non-parametric tests and the level of measurement (Afifi and Clark 1996; Diamantopoulos and Schlegelmilch 1997; Burns 2000; de Vaus 2002). The factors influencing the choice of statistical techniques are briefly discussed below.

6.2.1 Objectives of the Analysis

Analysis objectives serve to direct and guide the analytical process and are critical factors for the success of a research project. Analysis objectives fulfil three basic

roles: (i) help to ensure that only relevant analysis to be undertaken; (ii) to provide a check on the comprehensiveness of the analysis and (iii) to avoid redundancy in the analysis (Diamantopoulos and Schlegelmilch 1997).

The analysis objectives should link to the overall aim of the research in the sense that achievement of the former should contribute towards the achievement of the latter. This is because the better-specified the research objectives, the easier it is to derive appropriate analysis objectives from them (Diamantopoulos and Schlegelmilch 1997). In this study, the main objective is to examine the influence of religious affiliation and religiosity as predictors of consumer patronage behaviour. This leads to the selection of appropriate statistical techniques to find out whether such causal relationships exist.

6.2.2 Focus of the Analysis

The focus of the analysis involves the specification of the analytical stance or orientation to be adopted. It usually takes three basic forms: description; estimation and hypothesis testing (Diamantopoulos and Schlegelmilch 1997). An analysis can take one of these three foci. A descriptive focus is to provide a summary picture of the sample in terms of the variables of interest, while an estimation focus is to use the information in the sample to estimate the situation that is likely to exist in the population as a whole. A hypothesis testing focus is to test specific propositions regarding the variables of interest and use the evidence to draw conclusions for the population as a whole.

The main focus of the statistical analysis in this study was to test the proposed hypotheses concerning the influence of religious affiliation and religiosity on some

aspects of consumer patronage behaviour and to deduce conclusions based on the empirical findings. This includes two types of hypotheses: (1) difference hypotheses between samples and (2) hypotheses of association between variables. The results of hypotheses testing will be presented in the next two chapters.

6.2.3 Sample Type and Size

The type and size of the sample is also an important factor in determining the statistical analyses which can be performed on the data collected. According to Diamantopoulos and Schlegelmilch (1997, p. 66), unless the sample has been drawn probabilistically, the use of inferential statistics is not legitimate, since the latter makes use of the sampling error concept which cannot be assessed where non-probability sampling methods are employed. Also, some statistical procedures do not work well unless one has a 'sufficiently large' sample. For a simple analysis using non-parametric statistics, a sample size of at least thirty is recommended while for parametric statistics, a minimum sample of 100 is required (Diamantopoulos and Schlegelmilch 1997). It is not uncommon, however, for non-experimental consumer research to use parametric statistics with a sample size of less than 100 (see, for example, Shim and Kotsiopoulos 1991; McDonald 1995; Slowikowski and Jarratt 1997; Emenheiser, Clay and Palakurthi 1998; Chudry and Pallister 2002; Gilbert and Choi 2003; Hu and Jasper 2004; Rajagopalan and Heitmeyer 2005).

In the current study, a sample size of 226 has been included in the analysis which satisfies the requirement for parametric statistics. Another important factor that needs to be taken into account is the size of sample used in a particular analysis. As seen in Table 6.1, different statistical procedures require different numbers of

participants and this has been taken into consideration in selecting the appropriate statistical techniques.

Table 6.1 Rules of thumb for sample size selection

Statistical analysis	Minimum size
Chi-square	5 per cell
t-test, ANOVA, MANOVA	30 per cell
Factor analysis	50 - 100
Multiple regression analysis	50 - 300

Source: VanVoorhis and Morgan (2001)

6.2.4 The Level of Measurement

The level of measurement of variables refers to how the categories of the variable relate to one another (de Vaus 2002). It determines the level of sophistication of analysis that can be applied to the data. The higher the level of measurement, the more sophisticated the analysis (Diamantopoulos and Schlegelmilch 1997). There are four main levels of measurement: ratio, interval (also called continuous), ordinal and nominal (also called categorical or qualitative). Parametric statistics can only be applied to metric data (ratio and interval) while non-parametric statistics can be applied to both metric and non-metric (nominal) data. Since the data collected in this study are largely in the form of metric measurement, parametric procedures will be used in analysing the data.

The type of analysis applied depends on the number of variables to be analysed simultaneously and to the extent to which they differ in terms of their level

of measurement. When only one variable is to be analysed, a method designed for univariate analysis is used. When two variables are to be analysed at a time, bivariate analysis is used. Multivariate analysis is used when multiple dependent and multiple independent variables are to be analysed simultaneously (Hair et al. 1998; Tabachnick and Fidell 2001). In this study, all three types of statistical analysis will be used.

6.2.5 Distribution Pattern of the Data

The distribution pattern of the data also determines the type of statistical test to be undertaken. Significance tests can be grouped into two general classes: parametric and nonparametric. Parametric tests are generally considered more powerful because their data are typically derived from interval and ratio measurements when the likelihood model (i.e. the distribution) is known, except for some parameters (Hair et al. 1998). Non-parametric tests are also used, with nominal and ordinal data (Forza 2002). Experts on non-parametric tests (Hollander and Wolfe 1999) claim that non-parametric tests are comparable to parametric tests in terms of power.

The choice between these two relates to the question of whether the data satisfy the assumptions on which parametric tests are based. There are three basic assumptions underlying parametric tests, as described by Burns (2000, p. 151-152). First, the tests require data that can be treated as equal interval (e.g. Likert scale); second, data should be normally distributed or closely so, and third, the amount of random, or error, variance should be equally distributed among the different analyses. If these assumptions are violated, then non-parametric tests can be used to analyse the data (Forza 2002). This is because non-parametric or distribution-free tests do not

specify conditions about the shape or character of the distribution of the population from which samples are drawn.

Some statisticians however have claimed that parametric tests are in fact relatively robust. This means that “it is unlikely that the percentage probability will be very inaccurate unless the data do not meet the assumption at all, i.e. are not on an interval scale and/or are distributed in a very asymmetrical fashion” (Burns 2000, p. 152). In reality, the vast majority of data collected in the behavioural and social sciences do not follow univariate normal distributions, much less multivariate normal distributions (Micceri 1990). One of the reasons suggested for this is because many times the scales used by researchers are “dichotomous or ordered categories” rather than truly continuous (West, Finch and Curran 1995, p. 57). This is also true of the present study, in that the respondents reply to items based on a 5-point Likert-type scale which may contribute to the probability of non-normal data.

Thus following the common practice, before any tests were conducted using the data set, measures of central tendency (mean and standard deviation) were run for each of the variables in the study. In addition, the skewness and kurtosis of each variable were also examined to assess the normality of the distribution of the data. Skewness describes the extent of symmetry of a distribution, and a skewed variable is one whose mean is not in the centre of the distribution for a given standard distribution (Norusis 1990). The observed distribution is exactly normal if the values for skewness and kurtosis are zero (Hair et al. 1998; Coakes and Steed 2001) with a measure of skewness of ± 3.0 is usually regarded as a strong deviation from normality. From the analysis, none of the values of skewness and kurtosis for the variables in this study reached the ± 3.0 ; rather most of them were close to zero and very few of them

were close to one (plus or minus), indicating that the assumption of normality had not been violated. Therefore in this study, parametric tests will be employed to analyse the data.

6.3 Statistical Tests Used in this Study

Table 6.2 summarises the types of statistical analysis applied in this study to analyse the survey data. These are univariate analysis of descriptive statistics, bivariate analysis in the form of analysis of variance (ANOVA) and multivariate analysis in the form of factor analysis, multivariate analysis of variance (MANOVA) and multiple linear regression analysis.

The techniques selected were consistent with the research aims and objectives, characteristics of the data and properties of the statistical techniques (Malhotra and Birks 1999). The use of multiple techniques for data analysis is aimed at achieving the objectivity, rigour and logical reasoning in examining the research problems. The methodological issues and assumptions of each technique are discussed in the next sections.

Table 6.2 Summary of statistical tests used for data analysis

Independent variables	Dependent variables	Statistical procedures
Demographic characteristics		Descriptives
Religiosity Lifestyles Information sources Shopping orientation Store attributes		Exploratory factor analysis
Religious affiliation	Lifestyles Information sources Shopping orientation Store attributes Store patronage	MANOVA ANOVA
Religiosity	Lifestyles Information sources Shopping orientation Store attributes Store patronage	MANOVA ANOVA
Religious affiliation Religiosity Lifestyles Demographic	Information sources Shopping orientation Store attributes Store patronage	Multiple linear regression analysis

6.4 Univariate Analysis

The term univariate analysis refers to analyses in which there is a single variable without reference to other variables (Tabachnick and Fidell 2001). In this study, univariate descriptive statistics were used to: (a) provide a preliminary analysis for data transcription errors and distribution patterns (e.g. normality of the data); (b) to provide a description of the basic demographic characteristics of the samples obtained

from the survey; and (c) to provide a descriptive analysis of responses. The demographic characteristics of the respondents will be presented in the next chapter while the descriptive analysis of responses is reported in Appendix E.

6.5 Bivariate Analysis

Bivariate analysis involves the simultaneous analysis of two variables where the purpose is simply to study the relationship between the variables (Tabachnick and Fidell 2001). The main bivariate analysis carried out in this study was analysis of variance (ANOVA). Issues and applications of ANOVA are briefly discussed in the following section.

6.5.1 Analysis of Variance (ANOVA)

Analysis of variance (usually abbreviated as ANOVA) is an extension of the t-test that compare two or more means to see if there are any significant differences among them. ANOVA is by far the most flexible and widely used technique of quantitative analysis in marketing and consumer behaviour research (Malhotra, Peterson and Kleiser 1999). In this study, one-way ANOVA was applied to test the hypotheses concerning differences in consumer behaviour (i.e. use of information sources, shopping orientations, importance of store attributes and store patronage) among those from different religious affiliations and having different levels of religiosity.

The researcher has chosen ANOVA as the statistical methodology to compare the differences in mean values of the constructs among the groups because the constructs of interest (e.g. use of information sources) are being measured on an interval scale, and the groups (e.g. religious affiliations) are considered as the factors.

Also, the availability of predicted values which were equal to the mean values of the independent variable was desirable from a plotting and interpretation standpoint. The advantages of using ANOVA come from the following. First, it shows whether the means of three or more groups differ in some way although it does not tell us in which way those means differ. To determine that, it is necessary to compare two means (or combination of means) at a time (this will be discussed later). Second, it provides a more sensitive test of a factor where the error term may be reduced (Cramer and Howitt 2004).

The key statistic in ANOVA is the variance ratio (F), testing if the means of the groups formed by values of the independent variables (or combinations of values for multiple independent variables) are different enough not to have occurred by chance. If only two means are compared, then ANOVA will give the same results as the t-test for independent samples (Sirkin 1995). The F-ratio is based on the differences between two estimates of variance. One estimate comes from variability among scores within each group; this estimate is considered random or error variance. The second estimate comes from variability in group means and is considered a reflection of group differences plus error. The variance associated with differences among sample means is the numerator and the variance associated with error is in the denominator (Tabachnick and Fidell 2001). The larger the F-ratio, the bigger are the differences between the means of the groups making up a factor in relation to the differences within the groups and the more likely it is to be statistically significant (Cramer and Howitt 2004). If, on the other hand, the group means do not differ appreciably, then it is surmised that the independent variables did not have an effect

on the dependent variable. The following section discusses the assumptions that underlie ANOVA.

6.5.1.1 Assumptions

Like all other parametric tests, ANOVA makes certain assumptions about data so that they can be analysed in this way. There are three major assumptions that must be met before conducting ANOVA (Maxwell and Delaney 1990; Jaccard 1998; Roberts and Russo 1999). These are:

1. individual differences and errors of measurement are independent from group to group;
2. individual differences and errors of measurement must be normally or approximately normally distributed within each group; and
3. the size of variance in the distribution of individual differences and random errors is identical within each cell (i.e. homogeneity of variance).

Many writers of statistical texts however report ANOVA as being a robust procedure and the above assumptions frequently can be violated with relatively minor effects (Maxwell and Delaney 1990; Winer, Brown and Michels 1991; Hays 1994; Kirk 1995; Sirkin 1995; Hinton 1995; Diamantopoulos and Schlegelmilch 1997; Howell 1997; Jaccard 1998; Black 1999; Newton and Rudestam 1999; Roberts and Russo 1999; Everitt 2001; Cramer and Howitt 2004; Field 2005). Robust is the term used to denote the extent to which a statistical method produces correct results even when its assumptions fail to hold.

According to Maxwell and Delaney (1990), ANOVA is generally robust to violations of normality assumption, “even if a researcher’s data are not perfectly

normally distributed, they may be close enough to normal (e.g. unimodal, symmetric, most scores centrally located, few scores at the extremes) that there would seem to be little cause of concern” (p. 109). Studies also have suggested that the traditional F-test in ANOVA is robust especially when sample sizes are equal or near equal. Hays (1994) describes the robustness of ANOVA to non-normal distributions to be in proportion to the sample size; greater non-normality exerts less influence on the F-test as the sample size increases. Kurtosis (or flatness) tends to have very little effects on Type I errors but can have effects on Type II errors when sample sizes are small (Kirk 1995). The robustness of the test is also evident if the populations defined by the groups are homogeneous in forms, i.e., all show about the same degree of skewness and kurtosis (Roberts and Russo 1999).

ANOVA is also quite robust to moderate violations of homogeneity of variance and thus this assumption is frequently violated in practice (Maxwell and Delaney 1990; Jaccard 1998). Statistical literature suggests that a violation of equal variance assumption has minimal impact if the ratio of largest to smallest group variances is less than 3.0 (Howell 1997; Roberts and Russo 1999) or the sample sizes are fairly close to one another, i.e. the larger group size divided by the smaller group size is less than 1.5 (van der Heijden 2003). This is because studies in theoretical statistics have shown that a test on means will function very much as it should even if two populations have unequal amounts of variability as long as $n_1 = n_2$. In other words, the F-test is highly immune and “strong enough” to withstand a violation of the equal variance assumption if the sample sizes are equal (Huck and Cormier 1996).

Table 6.3 depicts a number of different types of ANOVA designs. It serves as a guide for the researcher in selecting the appropriate type of ANOVA to conduct for

the current study. As indicated, when we move from one independent variable to more than one, we change from one-way ANOVA to multiple ANOVA (factorial design). With two independent variables, there are three effects to be evaluated, including one interaction. With three independent variables, there are seven effects to be evaluated, including three two-way and one three-way interactions.

Table 6.3 Selecting the appropriate method for ANOVA designs

Number of IVs	Number of categories of each IV	Type of design	Type of test	Effects
1	2	Two group (2 means)	t test or one-way ANOVA	1: Between groups
1	3+	Multigroup (3+ means)	One-way ANOVA	1: Between group
2	2	2 x 2 factorial (4 means)	Factorial ANOVA	3: 2 main, 1 interaction
3	3, 2, 2	3 x 2 x 2 factorial (12 means)	Factorial ANOVA	7: 3 main, 3 two-way, 1 three-way interaction
4	3, 3, 4, 2	3 x 3 x 4 x 2 factorial (72 means)	Factorial ANOVA	15: 4 main, 6 two-way, 4 three-way, 1 four-way interaction

Note: All these designs assume one dependent variable, continuously distributed.

Source: Newton and Rudestam (1999, p. 208)

In this study, two types of univariate ANOVA procedures, namely one-way and two-way, were applied as a follow-up analysis when multivariate analysis of variance (MANOVA) was significant. A one-way ANOVA procedure was carried out

to obtain a simple effect of an independent variable on a dependent variable. A two-way ANOVA (i.e. factorial design) procedure was used to test the significance of the main and the interaction effects of the multiple independent variables on the dependent variables. Paired multiple comparisons were then conducted on significant findings in order to ascertain which pairs of group means significantly differed from one another. The issues surrounding the applications of univariate ANOVA are discussed in the following sections.

6.5.1.2 One-Way ANOVA

A one-way ANOVA was used in this study to test differences in a single interval dependent variable (for example, shopping orientation) among three or more groups (for example, Muslims, Buddhists, Hindus) formed by the categories of a single categorical independent variable (for example, religious affiliation). Also known as univariate ANOVA, simple ANOVA, single classification ANOVA, or one-factor ANOVA, this design tests whether the groups formed by the categories of the independent variable seem similar, specifically that they have the same pattern of dispersion as measured by comparing estimates of group variances. If the groups seem different, then it is concluded that the independent variable has an effect on the dependent variable. The null hypothesis is that $\mu_1 = \mu_2 = \dots = \mu_k$ with k equal to the number of means being compared.

As discussed earlier, an important consideration before conducting a one-way ANOVA is to test the assumption that each group (category) of the independent variable has an equal variance. For this purpose, Levene's test of homogeneity of variance which is conveniently available on SPSS was used in this study. This test

was favoured since it is less dependent on the assumption of normality than most tests (Tabachnick and Fidell 2000). If the significance value of Levene statistic exceeds 0.05, this means that the variances for the groups are equal and the assumption is justified. In case the equal variance assumption is untenable (i.e. as indicated by a significant Levene's F statistic at $p < 0.05$), comparisons between groups will be made based on Brown-Forsythe's F ratio which does not assume equal variance (Huck and Cormier 1996; Cohen 2001; Field 2005)¹. A study by Olejnik and Algina (1987) has shown that this test will give quite accurate error rates when the underlying distributions for the raw scores deviate significantly from the normal distribution.

Following the precedent of previous studies, the probability level accepted for statistical significance of ANOVA in the present study was set at $p < 0.1$, showing there was 10% probability that the result occurred by chance. This choice was made due to the exploratory nature of the present study and the researcher's desire to reduce the chance of committing a Type II error; that is, assuming no significant difference when a significant difference actually does exist. In this way, even if the analysis results in only a small difference, the results have a good chance of being significant. An even more conservative probability level was not used in this analysis to help avoid committing a Type I error. However, it should be acknowledged that this decision may have increased the probability of detecting effect differences that may have occurred merely by chance (Bryman and Cramer 2001).

¹ Another alternative version of adjustment procedure for ANOVA with unequal variance is Welch statistic. It is to be noted however that neither procedure is consistently more accurate than the other and that there are no simple rules that suggest which procedure to use for each possible pattern of sample sizes and variances (Cohen 2001; Field 2005).

6.5.1.3 Two-Way ANOVA

There are two types of effects in two-way ANOVA: main effects and interaction effects (Dancey and Reidy 2004). Main effects comprise the separate effect of each independent variable averaged over all levels of other variables. In other words, it provides an individual effect of each independent variable by controlling for other variables. Interaction effects, on the other hand, are specifically concerned with the joint effect of two or more independent variables on a dependent variable. Said another way, an interaction effect occurs when the effect of an independent variable on the dependent variable depends on the level of another independent variable. However, two variables can both influence a dependent variable without an interaction being present (Newton and Rudestam 1999). According to Schaffer (1991), an interaction effect can be either quantitative or qualitative. A quantitative interaction, sometimes also called an ordinal interaction, refers to two simple effects that are in the same direction but differ in strength, yielding a significant main effect and a significant interaction. A qualitative interaction, sometimes also called a disordinal interaction, is a function of simple effects in opposite directions and warrants a stronger emphasis in the reporting of results.

Despite the usefulness of ANOVA for the present study, one critical situation faced by the researcher in applying this mode of analysis is the requirement of equal sample sizes. Although this consideration is not an assumption of ANOVA, it simplifies calculations of sum of squares (Jaccard 1998). This is because, according to Jaccard (1998), when sample sizes are unequal, some of the independent variables in the design may be confounded. This means that a portion of the variance in the dependent variable that is explained by one factor also may be explained by another

factor. With unequal sample sizes in two-way factor design, the main effects typically will exhibit some degree of confounding; hence, their tests of significance will be affected accordingly but the test of the interaction effect is not affected.

A traditional approach to dealing with the problem caused by unequal sample sizes is to evaluate the significance of an individual effect in terms of its unique explained variance, eliminating from consideration any explained variance it has in common with other factors. For this purpose, multiple ANOVAs were performed in this study by using Type III sum of square to adjust for unequal sample sizes. It has also been called as Method 1, the regression, the unweighted means or the unique approach (Cramer 2003). Type III sum of square is a method for determining the F-ratio for a ANOVA with two or more factors with unequal or disproportionate numbers of cases in the cells. In this situation, the factors and interactions are likely to be related and so share variance. Thus by applying the Type III sum of square method, each effect is adjusted for all other effects (including any covariates). In other words, the variance explained by the effect is unique to it and is not shared with any other effect (Cramer and Howitt 2004). Maxwell and Delaney (1990) and Tabachnick and Fidell (2003) recommended this approach for experimental designs where each cell is expected to be equally important. It has been argued however, that this approach is also suitable for non-experimental designs such as the present study where the unique effect for each variable is of interest (Cramer 2003).

6.5.1.4 Post-hoc Procedure

The ANOVA procedure provides a method of rejecting the null hypothesis and accepting the alternative hypothesis that the groups' means are not equal, but it does

not pinpoint exactly where the significant difference lies if there are more than two groups (Field 2005). To ascertain whether the means of the different groups that integrate each of the variables are significantly different, use was made of pairwise multiple comparisons post hoc tests. Most often, post hoc tests do not use a single contrast, but instead test for differences among all possible combinations of groups. There are a number of post hoc tests but there is no clear consensus about which tests are the most appropriate to use (Cramer and Howitt 2004). Among the more common post hoc tests are the Scheffe test, Tukey's HSD method, Tukey's LSD approach, Duncan Multiple Range Test, Bonferroni and the Newman-Kuels test. Each test identifies which comparisons among groups (e.g. group 1 versus groups 2 and 3) have significant differences.

In this study, multiple comparison tests were conducted to determine where the significant difference(s) lie after the null hypothesis has been rejected in ANOVA. Two different types of post hoc test were applied for this purpose. When the equal variance assumption was met and the determination was made that differences exist among means, Bonferroni post-hoc tests were utilised. This procedure assumes equal variances and was preferred because it adjusts the observed significance level for the fact that multiple comparisons are being made. On the other hand, when equal variances were not assumed, Tamhane's T2 contrast was calculated. This test is known to be relatively robust against the violation of homogeneity of variance assumption. It is based on the unrelated t-test as modified in the Dunn-Sidak multiple comparison test and degrees of freedom as calculated in the Games-Howell multiple comparison procedure (Cramer and Howitt 2004). In keeping with customary practice, the significance level was set at $p < 0.05$ for all post-hoc comparisons.

6.6 Multivariate Analysis

Multivariate analysis is an extension of univariate and bivariate statistics that simultaneously analyses complicated datasets involving many independent variables and/or many dependent variables, all correlated to varying degrees (Hair et al. 1998; Tabachnick and Fidell 2001). In this study, two multivariate techniques, namely factor analysis and multiple regression analysis, have been used to analyse the data. The procedure of these techniques and their suitability for the current study are discussed in the following sections.

6.6.1 Factor Analysis

In the development, interpretation and validation of analytical tests, researchers often have to explain or predict behaviour in terms of constructs that are not directly observable. Such constructs are referred to as hypothetical or latent constructs (Ferguson and Cox 1993). The most common approach to identifying and measuring such constructs has been the application of factor analysis to behavioural data. Factor analysis is used to ascertain the underlying structure in a data matrix (Hair et al. 1998). It is an interdependence multivariate technique in which all variables are simultaneously considered.

Factor analysis identifies the conceptual dimensions of a larger construct that variables are meant to represent by forming factors to explain the whole variable set and thus each factor is predicted by all of the others. In other words, it determines the extent to which variables that are intercorrelated can be grouped together so that they can be treated as one combined variable or factor rather than a series of separate variables. This process allows the data to be described by a much smaller number of

variables than the original with a minimum loss of information (Hair et al. 1998; Cramer 2003). It is possible that in a matrix of correlation coefficients between a set of measures there are clusters of high correlation coefficients between subsets of the measures (Blaikie 2003). Factor analysis identifies these clusters; it establishes how much variance they have in common and the extent to which each measure contributes to this common variance. Hence, a large set of measures can be reduced to a small set of factors, or even just one factor, that can explain the maximum amount of common variance in the bivariate correlations between them.

Given that factor analysis is useful in gaining an overall understanding of the main dimensions underlying the variables, it is the obvious choice for helping the researcher to interpret the data used in this study. Using the data reduction command on SPSS, a factor analysis was conducted to determine the salient dimensions that make up the constructs of religious commitment, lifestyle, information sources, shopping orientations and store attribute importance. In addition, factor analysis provides construct validity for this study. Construct validity confirms how well the results obtained from the use of the measure fit the theory on which they are used.

There are two commonly intentional uses of factor analysis in the social sciences: to explore the underlying factor structures present in responses to a set of measures, and to confirm whether a set of measures in the form specified in a model of their relationships. Thus factor analysis may be either exploratory or confirmatory (Musil, Jones and Warner 1998). In exploratory factor analysis, the assumption is “everything is related to everything” where the potential clustering of variables is not determined a priori; rather, the intercorrelation among variables is used to group them into factors. It involves a family of procedures for removing the redundancy from a set

of correlated variables and representing the variables with a smaller set of factors. In confirmatory factor analysis (CFA), the researcher has an a priori hypothesis about the latent variable model and the factors that make up this model. The hypothesised inter-correlations and the patterns of observed variable relationships to underlying factors are specified in the CFA model and used to test the hypothesis, that, in fact, the observed sample correlations are consistent with the factor structure proposed (Musil et al. 1998). CFA is generally based on a strong theoretical foundation that allows the researcher to specify an exact factor model in advance and examine the goodness-of-fit between the hypothesised factor structure and the data. It is more of a theory-testing procedure than is exploratory factor analysis (Cramer 2003).

In this study, exploratory factor analysis was used since there was no exact factor model available to the researcher. The process of exploratory factor analysis in this study involves five major steps. These are pre-analysis checks, examination of the correlation matrix, factor extraction, factor rotation and interpretation of factor. The following section discusses the procedure followed in conducting exploratory factor analysis.

6.6.1.1 Pre-Analysis

Factor analysis makes a few assumptions about the data, most notably with regards to the underlying distribution and the sample size needed for a robust solution (Hutcheson and Sofroniou 1999). Thus, before using factor analysis, it is important to make a pre-analysis check to ensure that: (1) a stable population factor structure can emerge from the sample; (2) items are properly scaled and free from biases, and (3)

the data set is appropriate for the application of exploratory factor analysis (Ferguson and Cox 1993).

Stable factor structure

Statisticians have proposed four types of heuristic that need to be satisfied for ensuring a stable factor structure in exploratory factor analysis. These heuristics are outlined in Table 6.4.

Table 6.4 Type of heuristic for stable factor structure

Rule	Range	Advocate
Subject-to-variables ratio (N/p ratio)	Between 2:1 and 10:1	Kline (1986); Gorsuch (1983); Nunnally (1978)
Absolute minimum number of subjects (N)	100 to 200	Kline (1986); Comrey (1978)
Relative proportions of: variables to expected factors (p/m ratio), and subjects to expected factors (N/m ratio)	between 2:1 and 6:1	Cattell (1978)

Source: Ferguson and Cox (1993, p. 85)

Among these four heuristics, sample size has been regarded as the most important consideration. According to Hutcheson and Saforinou (1999), factor analysis is based on correlation coefficients, which tend to be most reliable when computed for large samples. However, there is no agreement as to what constitutes large (Pedhazur and Schmelkin 1991). Comrey and Lee (1992) give the following

guide for samples sizes 50 as very poor, 100 as poor, 200 as fair, 300 as good, 500 as very good and 1000 as excellent. Guadagnoli and Velicer (1988) however argue that mean factor loadings for a factor (factor saturation) is also a critical parameter and if four or more items load on each emergent factor ≥ 0.6 , then N is less relevant. However, the importance of N increases when both the factor saturation and the ratio of variables to expected factors (p/m) are low. In this case, it has been argued that an N of at least 300 is required (Tabachnick and Fidell 2001).

Other writers however have argued that smaller Ns might be acceptable. Pedhazur and Schmelkin (1991) suggest N = 50; Ferguson and Cox (1993) and Hair et al. (1998) suggest N = 100 while Hinkin, Tracey and Enz (1997) suggest N = 150 for obtaining an accurate solution in exploratory factor analysis. MacCallum et al. (1999) propose that when each factor is overdetermined (i.e. at least 3 or 4 variables represent each component) and the communalities are high (average 0.7 or higher), accurate estimates of population parameters can be obtained with samples as small as 100. Under more moderate conditions (not all components are overdetermined and communalities of around 0.5), samples of 200 would be more appropriate (Fabrigar et al. 1999). In this study, the sample size was 226, thus satisfying the minimum sample requirement for factor analysis.

Another important consideration in relation to sample size requirement is the number of variables to be analysed. As a general rule, there should be at least five times as many observations as there are variables to be analysed, and a more acceptable size would have a ten-to-one ratio (Hair et al. 1998, p. 99). The final sample size of 226 included in the analysis meets this criterion. Specifically, $5 \times 10 = 50$ for religious commitment measure; $5 \times 14 = 70$ for lifestyle measure; $5 \times 7 = 35$ for

information sources measure; $5 \times 26 = 130$ for shopping orientation measure and $5 \times 12 = 60$ for store attributes measure.

Item scaling

Factors are determined on the basis of the Pearson correlation coefficient, r , which requires data to be measured on a true continuous scale (i.e. interval or ratio). However, these requirements are rarely achieved in practice and Likert-type scales (e.g. five-point scale) are often deemed adequate (Ferguson and Cox 1993). According to Hutcheson and Saforinou (1999), the relaxation of the requirement for continuous data can be justified for EFA as the usefulness of the procedure is based purely on the interpretability of the factors. In this study, the Likert-type scale of 1-5 used assumed to provide interval-level data (Mitchell 1994; Blaikie 2003) and therefore the variables fit for factor analysis.

Appropriateness of dataset

Factor analysis requires that the variables used demonstrate univariate normality; that is, it is assumed that each variable conforms to the normal distribution curve (when the mean is in the centre of the distribution). The coefficients of skewness and kurtosis indicate whether or not each variable shows univariate normality. Muthen and Kaplan (1985) have argued that some degree of univariate skew and kurtosis is acceptable, for the majority of variables, if neither coefficient exceed ± 2.0 (where zero indicates no kurtosis). If there are at least 60% low correlations (<0.2) in the initial correlation matrix, then greater skew is acceptable. In this study, the coefficients of skewness and kurtosis of each variable were within the range of 0 ± 2.58 as specified by Hair et al.

(1998), suggesting a relatively normal distribution (see Appendix E). Therefore the data sets were deemed appropriate for factor analysis.

6.6.1.2 Examination of the Correlation Matrix

The next step in factor analysis is to establish whether the set of variables is a suitable selection by showing that there is some systematic covariation among the variables under consideration (Ferguson and Cox 1993). This involves examination of the correlation matrix, Bartlett's test of sphericity and the Kaiser-Meyer-Olkin measure of sampling adequacy (MSA). In factor analysis, some degree of multicollinearity is desirable, because the objective is to identify interrelated sets of variables. According to Hair et al. (1998), if visual inspection of the correlation matrix reveals a substantial number of correlations greater than 0.30, then factor analysis is appropriate. The correlations among variables can be analysed by computing the partial correlations among variables. If "true" factors exist in the data, the values of partial correlation should be small.

The Bartlett test is a statistical test for the presence of correlations among variables. It provides the statistical probability that the correlation matrix has significant correlations among at least some of variables. Thus, a significant Bartlett's test of sphericity is required. The KMO index, which can range from 0 to 1, indicates the degree to which each variable in a set is predicted without error by the other variables. If the KMO index reaches 1, each variable is perfectly predicted by the other variables without error. A value of 0.70 or more is generally considered sufficiently high, while a value below 0.50 is unsatisfactory and one over 0.90 is outstanding (Hair et al. 1998). In SPSS, the overall KMO value is provided as a single

statistic, whilst KMO values for individual variables are derived from the anti-image correlation matrix. The anti-image correlation matrix contains the negative values of the partial correlations among variables; smaller anti-image correlations are indicative of a data matrix suited to factor analysis (Hair et al. 1998).

6.6.1.3 Factor Extraction

Once the variables to be used in the factor analysis have been screened and selected, the factors needed to represent the data can be determined. The purpose of factor extraction is to identify and retain those factors which are necessary to reproduce adequately the initial correlation matrix (Ferguson and Cox 1993). This section describes the choice of extraction method and the rules followed in obtaining the optimum number of factors to extract.

Method of factor extraction

There are two basic models to obtain factor solutions. They are known as principal component analysis and common factor analysis (Hair et al. 1998). Principal component analysis is used when the researcher's objective is to summarise most of the original information (variance) in a minimum number of factors for prediction purposes. It is assumed that all variability in an item should be used in the analysis. In contrast, common factor analysis (CFA) is used primarily to identify underlying factors or dimensions that reflect what the variables share in common. According to Mitchell (1994), the decision on which factor model to utilise depends on the amount of prior knowledge the researcher has about the variance in the variables and the objectives of the factor analysis. In most cases, the results of extraction are similar

regardless of which factor model is used by the researcher (Fava and Velicer 1992). However, principal component analysis is often preferred as a method for data reduction while CFA is preferred when the goal of the analysis is to detect structure (Jackson 1991).

Following the recommendation made by Ferguson and Cox (1993), principal component (PC) analysis was used in this study to identify the factors which may explain the relationships within the data. PC is the most commonly used technique in marketing research for extracting factors. The main reason for its popularity is that, unlike some of the less structured factor analytical procedures; it leads to unique, reproducible results. PC relies upon the total variance to derive the factors with small proportions of unique variance. This model was deemed appropriate for the present analysis since the main concern of the researcher was to predict the minimum number of factors that were required to account for the maximum portion of the variance represented in the original set of variables and there is an a priori set of variables (Mitchell 1994). The PC method of extraction begins by finding a linear combination of variables (a component) that accounts for as much variation in the original variables as possible. It then finds another component that accounts for as much of the remaining variation as possible and is uncorrelated with the previous component, continuing in this way until there are as many components as original variables (Hair et al. 1998).

Criteria for selection of factors

The difficulty with using factor analysis as a statistical tool is deciding how many factors to be extracted in the final solutions, as these explain the greatest amount of

the total variance. There are several methods available, the most common of which is referred to as the Kaiser's rule of latent root criterion and was employed in this study. The rule is simple to apply, but depends on which factor model has been chosen. For the principal component analysis, only those values with an eigenvalue of greater than or equal to 1.0 are considered to be significant. An eigenvalue gives an estimate of the amount of variance associated with any factor, so that the rule involves retaining those factors which account for above average variance for interpretation (Ferguson and Cox 1993). This criterion is based on theoretical rationales developed using true population correlation coefficients. It is commonly thought to yield about one factor to every three to five variables. It appears to correctly estimate the number of factors when the communalities are high and the number of variables is not too large (Afifi and Clark 1996). Tabachnick and Fidell (2001) suggest that (a) if the number of components with eigenvalues greater than one is a reasonable number of components for the data (i.e. somewhere between the number of variables divided by 3 and the number of variables divided by 5), (b) if the number of variables is 40 or fewer, and (c) if the sample size is large, the number of components indicated by this criterion is probably correct.

6.6.1.4 Factor Rotation

The initial principal components which explain most of the variance in the variables should be rotated to a simple structure, defined as each variable having a high loading on one of the factors, and zero or small loadings on the others (Ferguson and Cox 1993). Rotation of the factors is desirable because it simplifies the factor structure and improves the interpretation by removing the ambiguities which often accompany

initial unrotated factor solutions (Mitchell 1994). There are two options available for specifying how factors are to be rotated. In an oblique extraction, factors are not completely independent and some commonality is maintained. In an orthogonal extraction, factors are extracted in such a way that the factor axes are maintained at 90 degrees which results in each factor being completely independent of all other factors. Orthogonal rotation is mathematically simpler to handle and should be used when the objective is to reduce the number of original variables regardless of how meaningful the resulting factors may be, or when the objective is to reduce a large set of variables to a smaller number of uncorrelated variables which can be used in subsequent predictive techniques such as multiple regression (Hair et al. 1998).

Factor rotations can be done in an infinite number of ways. Of the various possible procedures of rotation, the varimax procedure of orthogonal rotation, generally regarded as the “best” and most commonly used (Mitchell 1994; Afifi and Clark 1996; Fabrigar et al. 1999) was applied on the PC solutions. Varimax produces a solution based on a number of the squared loadings for the variables. Thus a rotation position is sought that maximising the sum of variances the squared factor loadings within each factor in the matrix. Further, these factor loadings are adjusted by dividing each of them by the communality of the corresponding variable. This adjustment is known as the Keiser normalisation, which tends to equalise the impact of variables with varying communalities (Afifi and Clark 1996). This means that varimax rotation gets over the problem of a general factor. Thus this procedure was favoured for this study since it minimises correlation across factors and maximises within the factors. As discussed by Hair et al. (1998), varimax procedure gives a clearer separation of the

factors and has proved very successful as an analytic approach to obtaining an orthogonal rotation of factors.

6.6.1.5 Interpretation of Factors

This section describes the fifth stage of factor analysis which involves the interpretation of factor loadings and the labelling of factors. The factor loadings are important in the context that they represent the correlation between the original variable and its factor. This is a measure of the contribution an item makes to a particular factor. Ideally, an item should have a high loading on only one factor. The greater the loading, the more the variable is a pure measure of the factor (Tabachnick and Fidell 2001). However, as in other aspects of factor analysis, statisticians differ on what constitutes a high loading. When a sample is being used, its size is important in determining whether a loading is statistically significant, that is, whether it can also be expected to exist in the population from which the sample was drawn. For a level of significance of 0.01 (two-tailed), the minimum loading for a sample of 50 is 0.72, for 100 is 0.51, for 200 is 0.36, for 300 is 0.30, for 600 is 0.21 and for 1000 is 0.16 (Stevens 1992). Comrey and Lee (1992) are more precise and comprehensive in their specification of loadings and described those in excess of 0.71 (50% overlapping variance) as excellent, 0.63 (40% overlapping variance) as very good, 0.55 (30% overlapping variance) as good, 0.45 (20% overlapping variance) as fair and 0.32 (10% overlapping variance) as poor. These of course, are guidelines and choosing the “cut-offs” for loadings is a matter of a researcher preference (Tabachnick and Fidell 2001), based on consideration of a theoretically sound solution.

While a common recommendation for the significance of factor loadings is 0.30 and above (Kline 1994; Hair et al. 1998; Tabachnick and Fidell 2001), Stevens (1992) suggests that only loadings of 0.4 and above should be taken seriously. In effect, a loading of 0.4 means that 16 percent of the item's variance contributes to the factor (arrived at by squaring the loading and multiplying by 100). A factor loading of 0.3 only accounts for 9 percent of an item's variance. To include such an item in a scale is to take into account 91 percent of unrelated variance, thus producing very 'muddy' and imprecise scales (Blaikie 2003). Therefore following Stevens's (1992) recommendation, in interpreting the analyses reported in this study, a criterion of 0.4 was adopted as a meaningful factor loading. A factor was dropped if had no loadings above 0.4 and/or consisted of only one item. This is in accordance with Hair et al. (1998) who proposed 0.4 as a conservative cut-off point for factor loadings to be considered practically significant when the sample size is 200 or greater.

Once the factors have been determined, the final task was to interpret what the factors actually represent by assigning a label to each factor in some meaningful way. This labelling was derived by examining the properties shared by the set of statements loaded within each factor. According to Hair et al. (1998), the label given should represent the derived factor as accurately as possible. Thus, reference has been made to the past literature in labelling the factors. Although the labels given were strictly subjective interpretations of the general nature of the construct based on its component items, this step can be described as the most important part of factor analysis process. This is because, if the selected factors are not interpretable, then the factor analysis presents little value to the researcher.

6.6.1.6 Data Reduction

In principal, exploratory factor analysis process ends at the factor interpretation stage as discussed in the preceding section. However, in the case of the present study, since the objective for applying exploratory factor analysis was to use the factors for further application to other statistical analysis, some form of data reduction must be made. According to Hair et al. (1998), a latent variable cannot be measured directly but can be represented by one or more indicator variables that form a better representation of the theoretical concept and simultaneously increases the reliability of the measure. Hair et al. (1998) describe three different methods of data reduction, namely (1) selecting surrogate variables, (2) computing factor scores and (3) creating summated scales.

The first method involves the selection of the variable with the highest factor loading on each factor to act as a surrogate variable to represent that factor. This method is only sensible when one variable has a factor that is substantially higher than all other factor loadings. However, the selection process becomes rather difficult when other variables may also have loadings that are fairly close to the surrogate variable. There is a risk that the selected surrogate variable may not address the issue of measurement error encountered when using single measures and thus mislead the subsequent analyses (Hair et al. 1998).

The second method of data reduction is the calculation of factor scores. Conceptually, the factor score represents the degree to which each individual score high on the group of items that have high loadings on a factor. Thus, higher values on the variables with high loadings on a factor will have a higher factor score. The factor score is computed based on factor loadings of all variables on the factor and therefore

it represents a composite of all variables loading on the factor. However, there is a potential disadvantage of this method in that all variables will have some degree of influence in computing the factor scores and make interpretation more difficult (Hair et al. 1998).

The third method used for creating a smaller set of variables to replace the original set is by combining several individual variables into a single composite measure. All variables loading highly on a factor are combined and the average score of the variables is used as a replacement variable. This method provides two specific benefits. First, by using multiple variables to calculate the replacement variable, the summated scale provides a means of overcoming to some extent the measurement error that might occur in a single question. Second, the summated scale has the ability to represent the multiple aspects of a concept in a single measure, thus facilitate the subsequent analysis (Hair et al. 1998).

In this study, summated scales were created; scores on the items within each of the factors were summed for every respondent and used as replacement variables for each factor. The sum was then divided by the number of items summed to create the scale in order to retain the original meaning of the numbers and to provide for comparison between scales. Thus this score may range from 1.00 indicate of strong disagreement to 5.00 indicate of strong agreement. This method was chosen because it is a compromise between the surrogate variable and the factor scoring method. It has the advantage of being a composite measure, thus reducing measurement error and takes into consideration those variables with high loadings on each factor and excludes those having little impact (Hair et al. 1998).

For each resulting factor, an internal reliability of the summated scales was tested by using Cronbach's coefficient alpha. This reliability analysis procedure provided information about the relationships among individual items and their internal consistency as well as examined the properties of a measurement scale and the questions that make it. This was discussed in the previous chapter.

6.6.2 Multivariate Analysis of Variance (MANOVA)

Multivariate analysis of variance (MANOVA) is an extension of the analysis of variance (ANOVA) technique that provides a simultaneous significance test of mean difference between groups, made of two or more dependent variables. Whereas univariate ANOVA tells only whether groups differ along a single factor, MANOVA has the power to detect whether the group differ along a combination of factors. Tabachnick and Fidell (2001) noted a number of advantages of MANOVA over univariate analysis of variance (ANOVA). Firstly, by measuring several dependent variables at a time instead of only one, the researcher improves the chance of discovering what it is that changes as a result of different treatments and their interactions. Secondly, MANOVA helps to minimise the chances of committing Type I error, i.e. a significant effect being identified when none exists. Thirdly, the use of MANOVA may reveal some differences that were not shown in separate ANOVAs.

6.6.2.1 Assumptions

As with any parametric statistics, there are a number of assumptions associated with MANOVA that have to be met in order for the analysis is meaningful in any way. The first assumption relates to the normal distribution of the dependent variables. In the

case of MANOVA, it assumes multivariate normality; that is, the normal distribution of the dependent variables and all linear combinations of them (Tabachnick and Fidell 200; Field 2005). However, there is no direct test for multivariate normality, and therefore univariate normality is generally used (Hair et al. 1998). Although multivariate normality is always preferable, it is also worth noting that “MANOVA is still a valid test even with modest violation of the assumption of multivariate normality, particularly when we have equal sample sizes and a reasonable number of participants in each group” (Dancey and Reidy 2004, p. 488). According to Tabachnick and Fidell (2001, p. 329), violations of this assumption can be tolerated for larger sample sizes or moderate sample sizes if the differences are due to skewness, as opposed to outliers. They further suggest that even in the of unequal sample sizes, a sample size of about 20 in the smallest cell should ensure robustness.

Another assumption pertains to the equivalent of variance-covariance matrices of the dependent variables across the groups. The Box’s M was used in this study as a test for equality of covariance matrices. If a value of Box’s M test is significant ($p < 0.05$), then the covariance matrices are significantly different and so the homogeneity assumption would have been violated (Field 2005). However, violation of this assumption has minimal impact if the sample sizes across groups are approximately equal, disregard the outcome of Box’s M test (Hair et al. 1998; Field 2005). Hair et al. (1998) suggest that groups are approximately equal if the largest group divided by the smallest group is less than 1.5. If the sample sizes are unequal, then robustness cannot be assumed, especially if Box’s M test is significant at $p < 0.001$ (Tabachnick and Fidell 2001; Field 2005). The Levene test at $p < 0.05$ was used to assess the equality of variance for a single variable across groups.

6.6.2.2 Criteria for Significance Testing

Where ANOVA tests the differences in means of the interval dependent for various categories of the independent(s), MANOVA tests the differences in the centroid (vector) of means of the multiple interval dependents, for various categories of the independent(s). There are four most popular criteria with which to assess multivariate differences across groups: Roy's greatest characteristic root (gcr); Wilks' lambda (also known as the U statistics); Hotelling's trace and Pillai's criterion (also known as Pillai-Bartlett trace, V). In choosing from these four statistics, Hair et al. (1998) suggest that "the measure to use is one most immune to violations of the assumptions underlying MANOVA that yet maintains the greatest power" (p. 351). Pillai's criterion is the most powerful and should be used if sample size decreases, unequal cell sizes appear or if the homogeneity of covariance assumption is violated (Hair et al. 1998).

For the present study, Pillai's trace and Wilks' lambda were used as a criterion for significance testing. This is consistent with Essoo and Dibb (2004). Since this was an exploratory study, the significance level was set at $p < 0.1$ level. A few researchers especially in consumer behaviour such as Moye and Kincade (2002) also used this level in their study.

6.6.2.3 Follow-up Analysis

When MANOVA turned out to be significant, it is necessary to examine, at a univariate level, which dependent variables are responsible for the statistically significant MANOVA results. For this purpose, univariate ANOVA was conducted.

The procedure and statistical issues related to ANOVA has been presented in Section 6.5.1.

6.6.3 Multiple Linear Regression Analysis

In this study, the objective of the researcher was to determine whether religious affiliation and religiosity have an influence on different aspects of consumer behaviour. The analysis of variance discussed in the previous section was used to determine whether there were significant differences in consumer behaviour among respondents from different religious groups and having different degrees of religiosity. However, this analysis could not predict the direction and the magnitude of the linear relationship between consumer behaviour variables (dependent variables) and the religious variables (independent variables). Thus multiple linear regression analysis, also known as Ordinary Least Square (OLS) regression, has been applied in the present study in addition to analysis of variance because its application helped the researcher to identify the direction and magnitude of the linear relationship between aspects of consumer behaviour and religious variables respectively.

Regression analysis is appropriate for interval or “near interval” outcomes, such as those used in the current study. More specifically, the greater the number of data points in the scales, the more likely the data will fulfill the required assumption of a normal distribution when using linear regression. In fact, a recent review of the literature in this area concluded that “for many statistical tests, rather than severe departures (from intervalness) do not seem to affect Type I or Type II errors dramatically” (Jaccard and Wan 1996).

Studenmund (2001) describes regression analysis as a statistical technique that explains the movements of one variable, the dependent variable as a function of movements in a set of other independent or explanatory variables. Using principles of correlation, the multivariate use of regression analysis is a way of using the association between variables as a method of prediction. Regression is able to describe the degree of relationship between a single dependent (criterion) variable and several independent (predictor) variables. Thus unlike Pearson's correlation coefficients which measure the influence of each item in isolation from other items, these results capture the collective influence of the independent variables on a dependent variable. The objective is to use the independent variable whose values are known to predict the single dependent values selected by the researcher. All variables are assumed to be observable and to have no measurement error (i.e. perfect measurement of variables). The application of multiple regression analysis falls into two broad categories of research problems: prediction and explanation (Hair et al. 1998).

One basic purpose of regression analysis is to predict the dependent variable with a set of independent variables. In doing so, multiple regression fulfils one of the two objectives (Hair et al. 1998). The first objective is to maximise the overall predictive power of the independent variables as represented in the variate. It is explicitly designed to make errors of prediction as small as possible using the least squares criterion for overall smallness (Allison 1999). The second objective is to compare two or more sets of independent variables to assess the predictive power of each variate. The second purpose of multiple regression analysis is to provide an assessment of the degree and direction (positive or negative) of the linear relationship

between independent and dependent variables by forming the variate of independent variables (Hair et al. 1998).

Multiple linear regression analysis is a powerful method for controlling variance. From it, one is able to estimate the magnitudes of different sources of influence on the dependent variable, through analysis of the variable inter-correlations. It also indicates how much of the dependent variable is contingent on the independent variables. Multiple linear regression is able to furnish tests relating to the combined effects of independent variables on the dependent variable, and of the separate effect of each of the independent variables. Thus, multiple linear regression analysis can be used to examine the effects of some independent variables on the dependent variable while “controlling” (i.e. held constant) for other independent variables (Allison 1999).

In order to calculate statistical predictions, the regression technique seeks to establish a rectilinear relationship between the variables concerned. Subsequently, the equation of a straight line is of important value, and is denoted by $Y = bX + a$ where Y = predicted score; b = slope; X = X intercept and a = Y intercept. The following equation is therefore used when a number of predictor variables are employed to predict a criterion variable in multiple linear regression:

$$Y = a + b_1X_1 + b_2X_2 + \dots + b_kX_k + e$$

where Y is the predicted value on the dependent variable, a is the Y intercept (the value of Y when all the X values are 0), X represents the various independent variables and b is the coefficients assigned to each of the independent variables during regression (Tabachnick and Fidell 2001).

6.6.3.1 Measurement of Variables

An important issue in multiple regression analysis is whether the measurement of the dependent and independent variables is appropriate for this type of analysis. Multiple regression analysis accommodates only quantitative explanatory variables, measured on an interval or continuous scale. When the independent variables are categorical (i.e. not interval) and have two or more categories, they can be coded into dummy variables. Dummy variables are dichotomous variables which act as replacement independent variables. The most common form of dummy coding method is indicator or binary coding, in which the category is represented by either 1 or 0 (Pedhazur 1997). By using the values of 0 and 1 we are merely describing the presence or absence of a particular attribute, rather than defining its level. For example, if marital status is coded 1 for single and 2 for married, the indicator conversion of the variable into a dummy variable will be 1 for single and 0 to married.

However, in an OLS regression, the use of dummy variables is not straightforward because the inclusion of all of them at the same time leads to a situation where perfect multicollinearity exists (Hutcheson and Sofroniou 1999). To prevent this, one of the categories must be omitted. Thus, if we have j categories, a maximum of $j - 1$ dummy variables can be entered into the model. For example, in the case of marital status, either the single or the married category must be eliminated, leaving only one dummy variable for the analysis. The dummy variable which is omitted is called the reference category and is the category against which other dummy variables are compared (Hutcheson and Sofroniou 1999). It is to be noted that the choice of reference category does not affect the model fit as this remains the same no matter which category is designed as the reference. However, as a rule of thumb,

the reference category selected should be one of the more heavily populated categories (Hardy 1993).

Following the coding convention set forth above, in this study, dummy variables were created to represent categories of grouped demographic variables for the regression analyses. Five independent variables namely religious affiliation, gender, marital status, ethnic origin and work status were converted to dummy variables. Gender was represented by a dummy variable with a value of 0 indicating male and a value of 1 indicating female. Marital status was represented by a dummy variable with a 1 for married and a 0 for not married. Ethnic was represented by two dummy variables with a value of 1 on the first (Ethnic 1) indicating Chinese, a value of 1 on the second (Ethnic 2) indicating Indian and a 0 on both representing Malay. Religious affiliation was represented by three dummy variables with a value of 1 on the first (Religion 1) indicating Buddhist, a value of 1 on the second (Religion 2) indicating Hindu, a value of 1 on the third (Religion 3) indicating Christian and a 0 on the three variables representing Muslim. Work status was represented by a dummy variable with a value of 0 indicating working and a value of 1 indicating non-working. Age, education attainment and monthly income were originally a grouped variable with multiple categories. For the regression analyses, these variables were treated as “ordered categorical data” by using a scoring method (in integer coding, 1, 2, 3...) where the ordered nature of the data is retained (Hutcheson and Sofroniou 1999).

6.6.3.2 Assumptions

Although “it has been demonstrated that regression analysis is generally robust in the face of departures from assumptions” (Pedhazur 1997, p. 34), it is necessary to point

out these assumptions in order to build a basic knowledge on how to obtain the best linear unbiased estimators from the regression analysis. The purpose here is not to give a detailed econometric analysis of these issues; rather the researcher wants to point to some of the steps taken to ensure the validity of the results. As Pedhazur (1997) notes, “knowledge and understanding of the situations when violations of assumptions lead to serious biases, and when they are of little consequence, are essential to meaningful data analysis” (p. 33). The analysis of regression assumptions is discussed below.

First, regression analysis assumes that variables have normal distributions. Non-normally distributed variables (highly skewed or kurtotic variables, or variables with substantial outliers) can distort relationships and significance tests. In this study, the normality assumption was examined by visual inspection of the normal probability plot of regression residuals. The normal distribution makes a straight diagonal line, and the plotted residuals are compared with the diagonal. If a distribution is normal, the standardised residual line closely follows the diagonal. However, it is generally agreed in the statistical literature that slight departures from this assumption do not appreciably alter our inferences if the sample size is sufficiently large (Afifi and Clark 1996, p. 109).

The second assumption underlying regression analysis is that of linearity of the relationship between the dependent and the independent variables in the model. Linearity supposes that this relationship is constant across the range of values for the independent variables. This implies that the amount of change in the mean value of the dependent variable is the same as a unit increase in the independent variable. Furthermore, correlation (Pearson’s r) can capture only the linear association between

variables. If there are substantial non-linear relationships, they will be ignored in the analysis, which in turn will underestimate the actual strength of the relationship (Tabachnick and Fidell 2001).

The third assumption that must be met in regression analysis is the equality of variance of the residuals (homoscedasticity). Homoscedasticity means that the variance of the dependent variable is approximately the same at different levels of the independent variables (Hair et al. 1998). Afifi and Clark (1996, p. 109) claim that this assumption is not crucial for the resulting least squares line. This is because the least squares estimates of α and β are unbiased whether or not the assumption is valid. However, when the violation is marked, it can lead to serious distortion of findings and seriously weaken the analysis, thus increasing the possibility of a Type I error (Tabachnick and Fidell 2001).

In the current study, a residual scatterplot (plot of the standardised residuals as a function of standardised predicted values) was constructed to check whether the assumptions of linearity and homogeneity had been violated. Ideally, residuals are randomly scattered around zero (the horizontal line), providing a relatively even distribution with no strong tendency to be either greater or less than zero. According to Hair et al. (1998), a violation is indicated when the residuals are not evenly scattered around the line.

The fourth assumption is that of the independence of error term. In regression analysis, it is assumed that each predicted value is independent, that is, serially uncorrelated. When the error terms for two or more independent variables are correlated, it is called autocorrelation or serial correlation (Lewis-Beck 1993). However, this problem tends to arise in time-series studies when the errors associated

with observations in a given time period carry over into future time periods (Pindyck and Rubinfeld 1991; Lewis-Beck 1993). Since the present study is cross-sectional in nature, this assumption is a less serious problem.

The least important of the assumptions concerning the error term is the assumption that the expected value of the error term for each observation is zero. According to Pindyck and Rubinfeld (1991) and Lewis-Beck (1993), the assumption that the error term has a zero expected value is not serious. They argue that in such a case, the estimated regression slope parameter will remain unchanged since the intercept will pick up the effect. It is however, more problematic if the errors have no constant variance or if they are not independent of each other. Nevertheless, since the intercept estimate is often of secondary interest in social science research, this potential source of bias is rather unimportant (Lewis-Beck 1993). Thus it is only of concern if the researcher is interested in the value of the intercept because this is the only coefficient that is affected by violation of this assumption.

Additionally, there are two issues that can arise during the analysis, that strictly speaking are not assumptions of regression, are none the less, of great concern to the researcher. These are outliers and multicollinearity.

Outliers

For the multiple regression analysis, the preliminary analysis was extended to include an evaluation of potential outliers and observations with excessive influence. Hair et al. (1998) described outliers as observations that are substantially different from the remainder of the data set (i.e. has an extreme value). They believed that outliers should be retained to ensure the generalisability to the entire population unless there is

demonstrable proof that they are truly deviant and not representative of any observations in the population (Hair et al. 1998). In this study, the process used to identify outliers was the casewise subcommand in the regression procedure. Cases that proved to have standardised residuals in excess of three were eliminated from the analysis (Hutcheson and Sofroniou 1999).

Multicollinearity

With the use of a large number of possibly highly correlated explanatory variables, the possibility of multicollinearity exists. The problem of multicollinearity in its simplest form has been traditionally characterised by a situation where an independent variable is highly correlated to one or more of the other independent variable in the model thus causes the model to be unstable when deleting or adding variables to the model (Hutcheson and Sofroniou 1999). According to Lehmann, Gupta and Steckel (1998), although multicollinearity does not violate any assumption (the independent variables do not have to be independent of each other), not does it affect the overall predictive capabilities of the model, it does make the estimates of the regression coefficients unreliable because the effect of the predictor variables are mixed or confounded. In the case where one independent variable can be precisely predicted from one or more of the other independent variables (perfect multicollinearity), the analysis fails as a regression equation cannot even be formulated. When a relationship is strong but not perfect (high multicollinearity), the regression equation can be formulated, but the parameters may be unreliable (Hutcheson and Sofroniou 1999). However, in most research, multicollinearity is present to some degree, but as long as the correlation coefficient between any two variables is not too large, assumption of multicollinearity

can then be ignored (Pedhazur 1997). As a general rule of thumb, multicollinearity might be present if any of the following situations exists (Mueller 1996; Grapentine 1997):

1. absolute values of one or more of the zero-order correlation coefficients between independent variables are relatively high
2. one or more of the metric or standardized regression coefficients have theory contradicting signs. For example, the coefficients take on negative values when theory or common sense suggests a positive relationship exists between the independent and dependent variable
3. one or more of the standardized regression weights are very large
4. the standard errors of the beta regression coefficients are unusually large
5. the regression equation has a large overall R^2 with several insignificant independent variables.

In order to assess the possible multicollinearity problem, initially, Pearson product-moment correlation matrix among the independent variables was first examined to detect the presence of high correlation. Hutcheson and Sofroniou (1999) suggest that high correlation values of about 0.8 or higher indicate a level of multicollinearity that may prove to be problematic. In this connection, Hair et al. (1998) noted that, whilst no limit has been set that defines high correlations, values exceeding 0.9 should always be considered, and many times correlation exceeding 0.8 can be indicative of problems. As seen in Appendix F, no high intercorrelations were found. At this stage, there were no reasons to be concerned about the presence of multicollinearity.

However, the absence of high bivariate correlations does not imply lack of collinearity because the correlation matrix may not reveal collinear relationships involving more than two variables (Mason and Perreault 1991). Therefore, it is necessary to measure the tolerance values and variance of inflation factors (VIF) while the stepwise regression analyses were run. Tolerance values represent the amount of variability of the selected independent variable not explained by the other independent variables. VIF on the other hand is an indicator of the effect that the other predictor variables have on the variance of a regression coefficient. Very small tolerance values (and thus large VIF values because $VIF = 1/\text{tolerance}$) denote high collinearity. Hair et al. (1998) suggested a tolerance value below 0.1, which corresponds to VIF greater than 10, as an indication of the presence of high multicollinearity. These values were used in this study as cut-off thresholds for high multicollinearity.

Another useful measure of multicollinearity in multiple regression is the condition index. It was suggested (Belsley 1991; Mason and Perreault 1991) that large condition indices be scrutinised to identify those associated with large variance proportions for two or more coefficients. Specifically, collinearity is indicated for the variables whose coefficients have large variances associated with a given large condition index (Pedhazur 1997). Belsley (1991) stated that “weak dependencies are associated with condition indexes around 5-10, whereas moderate to strong relations are associated with condition indexes of 30-100” (p. 56). According to Hair et al. (1998), a collinearity is indicated when a condition index that exceed the threshold value of 30 accounts for a substantial proportion of variance (0.9 or above) for two or

more coefficients. If this is the case, an attempt will be made to remedy those sets of variables from further analyses.

6.6.3.3 Automated Model Selection

Having assessed the variables for meeting the assumptions of regression analysis, the next step was to select the procedure of the independent variables to be included in the model. Hutcheson and Sofroniou (1999) describe three common automated selection procedures that can be used to find the “best” regression model: forward selection, backward elimination and stepwise selection. In forward selection, the equation starts out empty and independent variables are added one at a time provided they meet the statistical criteria entry (usually at $p = 0.05$). Once in the equation, an independent variable stays in. The backward elimination is the logical opposite of the forward selection procedure. The equation starts out with all independent variables entered and they are deleted one at a time if they do not contribute significantly to regression. After each variable is removed, the equation is re-calculated and those variables left in the model is re-examined to see if any contribute less than the criterion level. This process continues until no more variable reach the selection for removal.

Stepwise selection procedure is a compromise between forward and backward elimination and is one of the most commonly used methods of automated variable selection in marketing research. With the stepwise procedure, the order in which the predictor variables enter a regression equation is determined by a mathematical maximisation procedure. That is, the first predictor to enter is the one with the maximum correlation with the independent variable, and the second to enter is the predictor with the largest semi-partial correlation, and so on. However, at each stage

of the stepwise procedure, a test is made of the least useful predictor and the importance of each predictor is constantly reassessed. As a result, a predictor that has been deemed earlier to be the best entry candidate may later be superfluous. The advantage of this procedure is that it allows the ordering of the independent variables in a regression equation according to their significance for the predicted characteristic.

Hair et al. (1998) treated stepwise procedure as a method of variable selection that considers variables for inclusion in the regression model and selects the best predictors of the dependent variable. Hutcheson and Sofroniou (1999) proclaimed this procedure as a systematic screening that purifies the target independent variables prior to their entering into the model. Tabachnick and Fidell (2001) suggested that stepwise regression is promoted as a statistical model building technique because this technique skims the superfluous variables during the model building process and accommodates the variables that mostly provide a meaningful and significant contribution to the dependent variable.

From the preceding review, four important points can be made in favour of the stepwise selection in regression analysis. First, stepwise is a compromise between the other two procedures, that is, forward selection and backward deletion in which the equation starts out empty and independent variables are added one at a time as long as they meet statistical criteria, and deleted at any step if they no longer make a significant contribution to the regression model. Second, it is a screening procedure that skims out the redundant independent variables and selects the best predictors for the dependent variable. Third, it determines whether additional independent variables make any contribution compared to the other variables already included in the equation. Fourth, this procedure helps selection of the best variables where the

researcher has selected variables on the basis of a strong grounded theory for the purpose of analysis.

In this study, stepwise selection procedure was used to find the best regression model without testing all possible regressions. The use of this procedure was justified for this study because there were no theoretical a priori assumptions regarding the importance of each variable. In addition, it allows the researcher to examine the contribution of each independent variable to the explained variance of the dependent variable. Each independent variable is considered for inclusion prior to developing the main equation. The independent variable with the greatest contribution is added first. Independent variables are then selected for inclusion based on their incremental contribution over the variable(s) already in the equation (Hair et al. 1998). An alpha level of 0.1 was used as the entry cut-off value. This level of significance was chosen because the researcher was concerned that some of the variables would be excluded if the lower level of significance was used and the researcher tried to minimise the effect of collinearity as far as possible through variable selection following the advice of Speed (1994).

However, some controversies exist regarding the use of stepwise selection because the independent variables that are entered into the regression equation are based solely on statistical rather than theoretical or logical considerations (Menard 1995; Polit 1996). In such a regression, the computer determines the order of entry of the variables. Thus it produces results that tend to be idiosyncratic and difficult to replicate in any sample other than the sample in which they were originally obtained (Menard 1995, p. 54). This study therefore used stepwise regression as an exploratory

regression technique without specifically hypothesising which variables were most predictive of the criterion variable.

6.6.3.4 Coefficient of Multiple Determination (R^2)

The coefficient of determination (R^2) was used as an estimate of the predictive power of the regression model. R^2 values measure the percentage of the total variance of the dependent variable about its mean that is “explained” or “accounted for” by the independent variable (Lewis-Beck 1993). It is the squared product-moment correlation coefficient and its value can vary between 0 and 1. Thus, the closer this is to 1 the better the fit of the model (i.e. the better the independent variables are at accounting for or explaining the variation in the response variable) because if R^2 is 1 then the regression model is accounting for all the variation in the outcome variable. According to Hair et al. (1998), if the regression model is properly applied and estimated, it can be assumed that the higher the value of R^2 , the greater the explanatory power of the regression equation, and therefore the better the prediction of the dependent variable. However, there is no hard-and-fast statistical argument for deciding what level of R^2 is “high enough” (Uncles and Page 1998). The R^2 value can only improve by adding more variables to the model, even when their contribution is very small or accidental.

A development of the standard R^2 is adjusted- R^2 ; this is a measure of fit which take into account the number of independent variables and the sample size. While the addition of predictor variables will cause the R^2 to rise, the adjusted R^2 may fall if the added predictor variables have little explanatory power and are statistically insignificant (Hair et al. 1998; Newton and Rudestam 1999). Hence, adjusted R^2 is a

less biased measure for the variance explained by the model; therefore, it was used in this study for the interpretations of explanatory power.

It is to be noted that the predictive power of the regression is directly influenced by the sample size included in the regression analysis. Hair et al. (1998) produce a table illustrating the relationship between the sample size, the significance level chosen and the number of independent variables in detecting a significant R^2 , shown in Table 6.5. As evident from the table, the higher the sample size, the lower the R^2 for a given number of independent variables at a given significance and power levels. This has been taken into consideration in assessing the overall model fit for the regression equations in this study. A further discussion on R^2 values with special reference to the results of regression analysis obtained in this study will be presented in Chapter Nine.

Table 6.5 Minimum R^2 that can be found statistically significant with a power of 0.8 for varying numbers of independent variables and sample sizes

Sample size	Significance level 0.01				Significance level 0.05			
	No. of independent variables				No. of independent variables			
	2	5	10	20	2	5	10	20
20	45	56	71	n.a.	39	48	64	n.a.
50	23	29	36	49	19	23	29	42
100	13	16	20	26	10	12	15	21
250	5	7	8	11	4	5	6	8
500	3	3	4	6	3	4	5	9
1000	1	2	2	3	1	1	2	2

n.a. = not applicable

Source: Hair et al. (1998, p. 165).

6.6.3.5 Interpretation of Regression Variate

After the final model has been derived and the predictive power of the regression model has been estimated, the final task is to interpret the regression parameter by evaluating the estimated regression coefficients for their explanation of the dependent variable. The regression coefficient captures the effect of one variable while controlling for (i.e. holding constant) the other variables in the model. Two coefficient values are of interest for interpretation. These are the unstandardised and standardised regression coefficients, or b and β , respectively. The unstandardised regression coefficients (b -coefficients) represent the amount of change in the dependent variable associated with a one-unit change in that independent variable, with all other independent variables held constant (Newton and Rudestam 1999).

However, the b -coefficient cannot reveal which independent variable is a more important predictor of the dependent variable (Hair et al. 1998; Newton and Rudestam 1999). For this reason, a modified b -coefficient, called β -coefficient, was used in this study for the purpose of variate interpretation. A β -coefficient (commonly termed as β -weight with a β symbol) is a standardised regression coefficient that allows for a direct comparison between coefficients as to their relative explanatory power of the dependent variable. Whereas b -coefficients are expressed in terms of the units of the associated variable, thereby making comparisons inappropriate, β -coefficients use standardised data and can be directly compared (Hair et al. 1998). This permits the comparison of independent variables measured on very different scales, for example, income measured on ordered categorical scale and religiosity measured on a 5-point scale. The interpretation of β coefficients is in term of the expected change in the dependent variable, expressed in standard scores, associated

with a change of one standard deviation in an independent variable, while holding the remaining independent variables constant (Newton and Rudestam 1999). For example, if an independent variable has a beta weight of 0.5, this means that when other independents are held constant, the dependent variable will increase by half a standard deviation (i.e. 0.5 also).

6.7 Summary

Well-specified statistical procedures are essential prerequisites for successful data analysis and a sound empirical analysis demands careful attention to the suitability of the statistical techniques chosen for the analysis at hand. In light of an adequate understanding of how the statistical analyses are functioning, the information they are providing and the conclusions that can be drawn from them, quantitative analysis is able to enhance the researcher's ability to discriminate between sound scientific knowledge and exaggerated behavioural claims.

This chapter has delineated the procedure of statistical techniques applied to analysing the data obtained from the survey. The chapter firstly considered the choice of statistical package for the present study. It has been determined that the Statistical Package for the Social Science (SPSS) version 11.5 for Windows (2003) is the most suitable statistical programme to be used for this study. Next, factors that influence the choice of statistical techniques were reviewed. These were the objectives of the analysis, focus of the analysis, sample type and size, the level of measurement and the distribution pattern of the data. This was followed by the discussion on the method of statistical analyses used in the present study. A variety of statistical analyses were employed to analyse the survey data. These included univariate analysis of descriptive

statistics, bivariate analysis in the form of univariate analysis of variance (ANOVA), and finally multivariate analysis in the form of exploratory factor analysis, multivariate analysis of variance (MANOVA) and multiple linear regression analysis.

The next two chapters will report on the findings and results of the statistical techniques applied to the data collected from the survey. The reports will be presented together with the considerations of how well the data meet the statistical assumptions.

CHAPTER 7

DATA ANALYSIS AND RESULTS I

7.0 Introduction

The preceding chapter, the researcher has described the analytical procedures followed in analysing the survey data and the assumptions of each technique used. It helped to provide a technical guide for the researcher in conducting the statistical analysis. The chosen techniques included univariate analysis of descriptive statistics, bivariate in the form of analysis of variance (ANOVA) and multivariate in the form of exploratory factor analysis, multivariate analysis of variance (MANOVA) and multiple linear regression analysis.

This chapter reports the first part of data analysis and hypotheses testing. The Statistical Package for the Social Science (SPSS) version 11.5 software was used to analyse the data collected from the survey. In the first step, a demographic profile of the respondents was obtained using the descriptive statistics. Exploratory factor analyses were then performed to reduce the dimensionality of religiosity, lifestyle, information source, shopping orientation and store attribute variables into more manageable factors. Reliability analysis was carried out to examine the internal consistency of the factors obtained where Cronbach's alpha coefficient at 0.6 or higher was considered acceptable.

To test the research hypotheses, multivariate analysis of variance (MANOVA) was initially used to assess overall group differences across dependent variables. MANOVA is appropriate when the dependent variables are correlated and protects

against a Type I error (Hair et al. 1998). When MANOVAs turned out to be significant, univariate analysis of variance (ANOVA) was run to see if the constructs of interest showed variations across different response categories of the independent measures. Post-hoc tests were employed to examine paired mean comparisons of the categorical means resulting from the variance analyses. For each test, a criterion level at $p < 0.05$ was used for significance. The results and conclusions drawn from the analysis are summarised in the final section.

7.1 Characteristics of the Sample

Before going any further analysing the data provided by the samples, it is advisable to obtain some insights into the characteristics of respondents participating in this study with respect to their demographic and socioeconomic profiles. This is a fairly standard practice as it provides a background for the analysis that follows. Only a limited set of characteristics will be discussed here. They include gender, age, marital status, ethnicity, religious affiliation, employment, education and household income, all of which were expected to be important in the interpretation of the results.

The sample consisted of slightly more female respondents (55.8%) as compared to male respondents (44.2%). Respondents spanned the range of age categories from below 25 to 51 or over, with the majority (26.1%) of the respondents included in the survey sample being between the ages of 26 – 30, followed by the 31 – 35 group at 17.3%. The next largest age group was the 25 or below at 16.4%.

Respondents were also asked to provide information regarding their marital status. The analysis revealed that more than half of the total sample, or 62.4% of the 226 respondents included were married while 37.6% were single.

The general outlook of the sample distribution showed some consistencies with the overall ethnic composition in the study area. As the largest ethnic group in this country, the Malays made up about 45.1% of the samples, followed by the Chinese (33.2%) and Indian (21.7%). By comparison, the national ethnic distribution is 65.1% Bumiputra (consisting mainly Malay), 26% Chinese and 7.7% Indians (Malaysian Department of Statistics 2001).

When the religious variable was examined, the largest proportion of the respondents was Muslim, accounting for 45.6% of the total sample. This was followed by Buddhist (25.2%) and Hindu (15%). Another 14.2% of the total respondents indicated that they were affiliated with Christianity. By comparison, the national religious distribution is 60.4% Muslim, 19.2% Buddhist, 6.3% Hindu and 9.1% Christian (Malaysian Department of Statistics 2001).

Statistics on employment showed that a large proportion of the respondents (49.6%) were employees working in the private sector while 32.3% of the respondents were government employees. Self-employed and non-working (e.g. students, homemakers, retirees) respondents constituted 9.7% and 8.4% of the sample respectively.

As far as the educational level was concerned, 23.9% of the respondents possessed secondary education while 21.7% had attained some college diploma. The largest percentage of respondents, 43.8% were first degree holders while 10.6% earned a postgraduate degree. The high proportion of respondents having a high education level was due to the urban nature of the sample.

The income frequency count showed that 32.3% of the respondents had a total household income of RM2501–RM3500. 20.8% reported figures between RM5501–

RM7500 while 15.9% indicated income between RM1501–RM2500. Further, 14.6% of the respondents revealed income between RM3501–RM5500, 11.5% had a total income over RM7501 while the remaining 4.9% of the respondents reported income up to RM1500.

Table 7.1 presents the key demographic characteristics of the sample in the study. In summary, the sample included in this study appeared to be younger, more educated and includes more middle-income earners, which are typical characteristics of the urban Malaysian population.

Table 7.1 Distribution of respondents by demographic characteristics

Characteristics	Category	Frequency	Percentage
Gender	Male	100	44.2
	Female	126	55.8
Age	< 25	37	16.4
	26 – 30	59	26.1
	31 – 35	39	17.3
	36 – 40	33	14.6
	41 – 45	17	7.5
	46 – 50	31	13.7
	> 51	10	4.4
Marital status	Single	85	37.6
	Married	141	62.4
Ethnic group	Malay	102	45.1
	Chinese	75	33.2
	Indian	49	21.7
Religious affiliation	Islam	103	45.6
	Buddhism	57	25.2
	Hinduism	34	15.0
	Christianity	32	14.2
Employment	Self-employed	22	9.7
	Government sector	73	32.3
	Private sector	112	49.6
	Not currently employed	19	8.4
Education	Secondary school	54	23.9
	College diploma	49	21.7
	First degree	99	43.8
	Postgraduate degree	24	10.6
Household income	Up to RM1,500	11	4.9
	RM1,501-RM2,500	36	15.9
	RM2,501-RM3,500	73	32.3
	RM3,501-RM5,500	33	14.6
	RM5,501-RM7,500	47	20.8
	RM7,501	26	11.5

7.2 Data Reduction

Prior to hypotheses testing, multiple items measuring religiosity, lifestyle, information source, shopping orientation and store attributes were factor analysed to reduce the numerous variables to a manageable number of components. As was described earlier, factor analysis is designed to simplify the correlation matrix and reveal a small number of factors which can explain the correlation. Such analysis is useful in gaining understanding on the main dimensions that underlie the observed sets of items (Hair et al. 1998).

In addition, it is argued that the convergent loadings of items on a separate factor is a trait of construct validity (DeVellis 1991; Bearden and Netemeyer 1999) and that in general, factors extracted from a factor analysis are assumed to represent the validity of the underlying latent constructs being investigated in a research study (DeVellis 1991). Exploratory factor analysis was therefore performed on the constituent items representing the different constructs to validate empirically the theoretical structure of the scale.

Factoring ceased when all eigenvalues of greater than one were obtained and when a set of factors explained a large percentage of the total variance is achieved. An accepted method of interpretation of factor loadings is to regard as significant any variable with a loading of 0.4 or greater as associated with the appropriate factor. To examine the internal consistency of the factors obtained, Cronbach's alpha was calculated where a coefficient at 0.6 or higher was considered acceptable.

7.2.1 Factor Analysis on Religiosity

The responses to the 10 religiosity variables were studied by factor analysis in order to identify the interrelationships among these independent variables and to summarise the information in a smaller set of variables. Factor analysis was deemed appropriate for this construct because Keiser-Meyer-Olkin measure of sampling adequacy test index equalled 0.846 and Bartlett's test was significant at $p < 0.0001$. Based on the principal components factor analysis, factors with latent roots or eigenvalues greater than 1.0 and items with rotated factor loadings of 0.4 or greater were retained (Hair et al. 1998).

Consistent with the Worthington et al. (2003) findings, the factor loadings show that the scale items from the operational definitions loads clearly on two distinct factors, which together explained more than half of the variance observed in the variables (55.68 percent). These factors were named based on items that loaded the highest for each factor. Table 7.2 summarises the results of factor analysis on religiosity variables.

Factor 1 (eigenvalue 3.25) had six variables and accounted for 32.5 percent of the common variance. This factor included the following variables:

1. Religion is especially important to me because it answers many question about the meaning of life.
2. It is important to me to spend periods of time in private religious thought and prayer.
3. My religious beliefs lie behind my whole approach to life.
4. Religious beliefs influence all my dealings in life.
5. I spend time trying to grow in understanding of my religion.

6. I often read books and magazines about my religion.

Because all the variables loaded in this factor measure an individual's personal commitment towards his/her religion, this factor was conceptually labelled as the "intrapersonal religiosity". This factor had a very high internal consistency with an alpha coefficient at 0.85.

Factor 2 (eigenvalue 2.32) had four variables and accounted for 23.18 percent of the common variance. It included the following variables:

1. I keep well informed about my local religious group and have influence in its decisions.
2. I enjoy participating in the activities of my religious organisation.
3. I make financial contributions to my religious organisation.
4. I enjoy spending time with others of my religious affiliation.

This factor is clearly described the "interpersonal religiosity" since all the four variables loaded in this factor had a similar characteristic relating to an individual's sense of belonging to his/her religious group. The internal reliability for this factor was also considered to be acceptable with a Cronbach's alpha coefficient at 0.68.

It can be seen from the above analysis that there is very little overlap between the two factors. The variables tend to be theoretically pure and the factors are relatively independent of one another. In essence, this analysis corroborates Worthington et al.'s (2003) conceptualisation that religiosity is a multidimensional construct that consists of two main dimensions, intrapersonal (mainly cognitive) and interpersonal (mainly behavioural) religiosity. Thus, for the purpose of hypotheses testing, the religiosity construct will be viewed from these two dimensions.

Table 7.2 Factor structure of religiosity

Factor and variables	Factor loadings	Alpha	% variance
Factor 1: Intrapersonal religiosity			
Religion is especially important to me because it answers many questions about the meaning of life	0.818	0.85	32.5%
It is important to me to spend periods of time in private religious thought and prayer	0.771		
My religious beliefs lie behind my whole approach to life	0.743		
Religious beliefs influence all my dealings in life	0.711		
I spend time trying to grow in understanding of my religion	0.636		
I often read books and magazines about my religion	0.570		
Factor 2: Interpersonal religiosity			
I keep well informed about my local religious group and have influence in its decisions	0.752	0.68	23.18%
I enjoy participating in the activities of my religious organisation	0.740		
I make financial contributions to my religious organisation	0.637		
I enjoy spending time with others of my religious affiliation	0.553		

Note: Factors were extracted by using principal component method with a varimax rotation

7.2.2 Factor Analysis on Lifestyle

The test of Kaiser-Meyer-Olkin measure of sampling adequacy (index: 0.736) and Bartlett's test of sphericity ($p < 0.0001$) indicated that the data on lifestyle were appropriate for factor analysis. Given these results, factor analysis was conducted. The factor analysis of the 14 lifestyle variables yielded a four principal components solution. Each one of these four factors had an eigenvalue which was greater than one. The identified factors were subsequently subjected to reliability testing using Cronbach's alpha as a measure of internal consistency.

Table 7.3 summarises the resultant rotated factor loadings and the Cronbach's alpha coefficients. In total, the four factors accounted for 60.08 percent of the variable variance. The first factor (eigenvalue 2.67) explains 19.09 percent of the total variance and included the following five variables:

1. The traditional values of my peoples are important to me.
2. I should hold on to the traditional values of my people.
3. I like to conform to the traditional values of my peoples.
4. It is important to me to feel that I belong to my ethnic group.
5. The traditional values of my people will slowly erode in time.

The Cronbach's alpha was calculated on the five items and the resulting coefficient was at 0.76, indicating high internal consistency and reliability for the factor. By looking at the highest loadings, this factor can be labelled as the "ethnic conscious".

The second factor (eigenvalue 2.31) consists of four variables and explains 16.47 percent of the variance. This factor was named the "innovativeness" factor. It included the following variables:

1. Friends ask my advice on new products in the market.

2. Friends ask me for information about new brands in the market.
3. I influence my friends in their purchases.
4. I like to try new things before others do.

The Cronbach's coefficient alpha for this factor was 0.74, indicating high internal consistency and reliability.

The third factor (eigenvalue 1.72), conceptually labelled the "traditional family" factor, explains 12.27 percent of the total variance and produced a Cronbach's alpha of 0.67. It included the following three variables:

1. Children brings closer the relationship between husband and wife.
2. A child should be taught to respect parental authority.
3. Husband should accompany his wife shopping.

The final factor (eigenvalue 1.71) explains 12.24 percent of the total variance and included the following two variables:

1. Most of the latest fashion is not suitable for me.
2. I like to wear traditional clothes.

This factor was named the "fashion conservative" factor. The alpha coefficient for this factor was at 0.67, which is well above the acceptable level of reliability. Factor scores were calculated for subsequent analyses.

Table 7.3 Factor structure of lifestyles

Factor and variables	Factor loadings	Alpha	% variance
Factor 1: Ethnic conscious			
The traditional values of my peoples are important to me	0.840	0.76	19.09%
I should hold on to the traditional values of my people	0.771		
I like to conform to the traditional values of my peoples	0.726		
It is important to me to feel that I belong to my ethnic group	0.653		
The traditional values of my people will slowly erode in time	0.554		
Factor 2: Innovativeness			
Friends ask my advice on new products in the market	0.794	0.74	16.47%
Friends ask me for information about new brands in the market	0.775		
I influence my friends in their purchases	0.774		
I like to try new things before others do	0.612		
Factor 3: Traditional family			
Children brings closer the relationship between husband and wife	0.834	0.67	12.27%
A child should be taught to respect parental authority	0.819		
Husband should accompany his wife shopping	0.509		
Factor 4: Fashion conservative			
Most of the latest fashion is not suitable for me	0.832	0.67	12.24%
I like to wear traditional clothes	0.810		

7.2.3 Factor Analysis on Information Sources

The Kaiser-Meyer-Olkin measure of sampling adequacy test of sample adequacy was 0.718 and the Bartlett's test of sphericity was significance at $p < 0.0001$. The data were therefore deemed appropriate for factor analysis. Principal components factor analysis with a varimax rotation was used to factor the seven information sources. The results of this analysis are shown in Table 7.4. According to the result, all seven information sources can be grouped into two factors, which explained 56.23 percent of the total variance. Each one of these factors had an eigenvalue which was greater than one.

Table 7.4 Factor structure of information sources

Factor and variables	Factor loadings	Alpha	% variance
Factor 1: Media source			
Newspaper advertising	0.796	0.75	32.9%
Catalogue/brochures	0.757		
Television advertising	0.745		
Magazine advertising	0.729		
Factor 2: Personal source			
Family/relatives	0.749	0.57	23.33%
Salesperson's advice	0.727		
Friend's opinion	0.725		

Note: Factors were extracted by using principal component method with a varimax rotation

The first factor (eigenvalue 2.3) explains 32.9 percent of the total variance and had four sources: newspaper advertising, catalogue/brochures, television advertising and magazine advertising. Thus this factor was labelled "media source". The second

factor (eigenvalue 1.63) explains 23.33 percent of the total variance and contained three sources: family/relatives, salesperson's advice and friend's opinion. Thus this factor was named "personal source". Cronbach's alpha coefficients for "media source" and "personal source" were 0.75 and 0.57 respectively, indicating high internal consistency and reliability for these two factors. Factor scores for the two factors were used in subsequent analyses.

7.2.4 Factor Analysis on Shopping Orientation

To ensure orthogonality among the sets of dependent variables, a principal components factor analysis with varimax rotation was performed on the total set of 26 shopping orientation variables. The Kaiser-Meyer-Olkin MSA test (index: 0.816) and Bartlett's test of sphericity ($p < 0.0001$) indicated that the 26 variables of shopping orientations were appropriate for factor analysis. Given these results, the exploratory factor analysis was conducted.

Using a minimum eigenvalues of 1.0 as the criterion to control the number of factors extracted, the analysis initially yielded eight factors. However, of these eight factors, factor 2 (5 variables), 7 (2 variables) and 8 (2 variables) were found unreliable with coefficient alphas of 0.46, -0.25 and -0.27 respectively. To improve the coefficient alpha of factor 2, one variable in this factor was discarded. The variable was "I do not consider shopping as fun". After deletion of this variable, the computation of Cronbach's alpha resulted in a coefficient of 0.78 for the respecified scale. However, with no possible way to improve the reliability for factors 7 and 8, all four variables forming these factors were eliminated. The variables were:

1. I have somewhat old fashioned tastes and habits.

2. I make purchases only when there is a need, not on impulse.
3. I do not compare prices before making my purchases.
4. I find myself checking the prices in different stores even for small items.

The factor model was then respecified by deriving a new factor solution with those five variables omitted. The Kaiser-Meyer-Olkin MSA test (index: 0.817) and Bartlett's test of sphericity ($p < 0.0001$) indicated that these data were deemed fit for factor analysis.

A new factor solution, derived by principal component factor analysis, produced six factors that yielded eigenvalues greater than one. The factors were subjected to varimax rotation to provide a simpler column structure for interpretation. All variables were considered significant because they were loaded in excess of 0.4 and therefore no variable was eliminated.

Table 7.5 summarises the final solution of factor analysis on shopping orientation measures. These six factors were retained, explaining 64.84 percent of total variance, which satisfies the percentage of variance criterion for social science research (Hair et al. 1998). Factor 1 (eigenvalue 2.87) consists of four variables, which have a Cronbach's alpha of 0.83 and explain 13.67 percent of the variance. It included the following variables:

1. Owning branded goods can enhance one's status and prestige.
2. I am concerned about brand names when making purchases.
3. I am willing to splurge on status symbols like branded watches, wallets, clothing, etc.
4. I generally try to buy branded goods.

It can be seen that this factor was characterised by variables related to consumers' preference for branded products and therefore was conceptually labelled "brand conscious" orientation. Consumers who score high on this dimension seem to think branded products can enhance one's status and prestige. They pay attention to the brand names of products when making purchases and are willing to splurge on branded products. This is reminiscent of a shopping orientation identified by Shim and Kotsiopoulos (1993), Fan and Xio (1998), Shamdasani et al. (2001) and Moye and Kincade (2003).

Factor 2 (eigenvalue 2.56) consists of four variables, which have a Cronbach's alpha of 0.78 and explain 12.17 percent of the variance. This factor included the following variables:

1. Shopping takes the boredom out of daily routines.
2. I view shopping as a social activity.
3. I like to go shopping.
4. I usually continue shopping around even after making purchases.

This factor was conceptually labelled "shopping enjoyment" orientation. It is comparable to recreational shopping orientation previously identified by Gehrt and Karter (1992), Gehrt et al. (1992), Shim et al. (1998) and Shamdasani et al. (2001) and is associated with a consumer's tendency to enjoy shopping and browsing activities.

Factor 3 (eigenvalue 2.46) also consists of four variables, which explain 11.73 percent of the variance and a Cronbach's alpha of 0.8. The factor included the following variables:

1. I usually have outfits that are of the very latest design.
2. It is important to me that my clothes are of the latest style.

3. I read fashion news regularly to see what is new in fashion.
4. I consider myself to be trendy.

Characteristics identified in this factor are of the consumers who are particularly concerned with styles and being in style is important to them. They read fashion news regularly to know about the latest style. They also considered themselves as trendy, as one statement in this factor implies. Thus this factor was labelled “fashion conscious” shopping orientation, similar to Shim and Kotsiopulos’ (1993) and Shamdasani et al.’s (2001) characterisation of fashion conscious shoppers.

Three variables were identified under factor 4 (eigenvalue 2.1) which explain 10.0 percent of the variance. The scale had a Cronbach’s coefficient alpha 0.73, indicating sufficient reliability in terms of internal consistency. It included the following variables:

1. I look for quality in a product and is willing to pay extra for it.
2. It is generally worth it to pay more for quality.
3. The quality of merchandise I buy is more important to me than the prices I have to pay.

All three variables loaded in this factor were related to a consumer’s preference for quality products and therefore was labelled “quality conscious” orientation. Consumers who score high on this factor perceive the quality of a product to be more important than the prices they have to pay and are willing to pay extra for it. This orientation is the same as Fan and Xio’s (1998), Siu et al.’s (2001) and Shamdasani et al.’s (2001) quality conscious shoppers.

The three variables in factor 5 (eigenvalue 1.85) present a Cronbach's alpha of 0.66 and explain 8.82 percent of the variance. This factor comprised the following variables:

1. I often feel guilty for buying so many unnecessary things.
2. I often buy things which I never intended to buy.
3. I think I am impulsive buyer.

Since this factor is dominated by such variables as buying unnecessary things and impulsiveness in shopping, this factor was labelled the "impulsive shopping" orientation. This factor is consistent with Fan and Xio's (1998), Siu et al.'s (2001) and Shamdasani et al.'s (2001) characterisation of an impulsive shopper.

Finally, factor 6 (eigenvalue 1.78), also includes three variables, having a Cronbach's alpha of 0.65 and explaining 8.45 percent of the variance. This factor was conceptually named "price conscious" and included the following variables:

1. I prefer to buy things on sale.
2. I usually watch the advertisement for announcement of sales.
3. I can save a lot of money by shopping around for bargains.

This factor accord with Shim and Kotsiopoulos's (1993) and Shamdasani et al.'s (2001) price conscious shopping orientation, which focuses on a concern about product price. It is also similar to Vijayasathy's (2003) economic shoppers, who tend to shop around before making purchase decisions.

Table 7.5 Factor structure of shopping orientation

Factor and variables	Factor loadings	Alpha	% variance
Factor 1: Brand conscious			
Owning branded goods can enhance one's status and prestige	0.764	0.83	13.67%
I am concerned about brand names when making purchases	0.756		
I am willing to splurge on status symbols like branded watches, wallets, clothing, etc.	0.754		
I generally try to buy branded goods	0.687		
Factor 2: Shopping enjoyment			
Shopping takes the boredom out of daily routines	0.783	0.78	12.17%
I view shopping as a social activity	0.707		
I like to go shopping	0.692		
I usually continue shopping around even after making purchases	0.637		
Factor 3: Fashion conscious			
I usually have outfits that are of the very latest design	0.763	0.80	11.73%
It is important to me that my clothes are of the latest style	0.742		
I read fashion news regularly to see what is new in fashion	0.724		
I consider myself to be trendy	0.566		

Factor 4: Quality conscious			
I look for quality in a product and is willing to pay extra for it	0.835	0.73	10.0%
It is generally worth it to pay more for quality	0.773		
The quality of merchandise I buy is more important to me than the prices I have to pay	0.720		
Factor 5: Impulsive shopping			
I often buy things which I never intended to buy	0.794	0.66	8.82%
I often feel guilty for buying so many unnecessary things	0.770		
I think I am impulsive buyer	0.689		
Factor 6: Price conscious			
I prefer to buy things on sale	0.818	0.65	8.45%
I usually watch the advertisement for announcement of sales	0.750		
I can save a lot of money by shopping around for bargains	0.658		

Note: Factors were extracted by using principal component method with a varimax rotation

7.2.5 Factor Analysis on Store Attributes

The consumers' importance perceptions of the 12 store attributes were also pre-processed using a two-step procedure. First, the importance ratings for the 12 store attributes were factor analysed using the principal components procedure followed by a varimax rotation. The purpose of this step was to reduce the dimensionality of these data from 12 store attributes to a few factors, where each factor represented a linear combination of a number of store attributes. Second, the original data matrix, derived from five-point importance scales, for the 12 store attributes was replaced by a factor scores matrix. Each respondent's factor score was the weighted sum of the corresponding store attribute ratings making up that factor.

The Kaiser-Meyer-Olkin measure of sampling adequacy test (KMO index: 0.701) and Bartlett's test of sphericity ($p < 0.0001$) indicated that the data on store attributes were appropriate for factor analysis. The principal component analysis and the ensuing varimax rotation of the consumers' importance judgments for the 12 store attributes produced four factors that yielded eigenvalues greater than one. Subjective evaluations of the possible processes influencing consumers' judgements were made and each factor is discussed below with reference to the variables having high loadings.

The results of the factor analysis carried out on the various store attributes are shown in Table 7.6. Four factors were extracted revealing four underlying dimensions of store image, which explained 60.38 percent of the total variance. Loadings for these four factors varied in a range between 0.6 and 0.842.

Table 7.6 Factor structure of store attributes

Factor and variables	Factor loadings	Alpha	% variance
Factor 1: Merchandise			
Quality of merchandise	0.842	0.74	17.21%
Variety of selection	0.789		
Brand carried by store	0.736		
Factor 2: Reputation			
Reputation of store	0.748	0.62	16.22%
Reputation for fashion	0.699		
Helpfulness of salespersons	0.653		
Class of clientele	0.600		
Factor 3: Attractiveness			
Merchandise display	0.810	0.63	14.85%
Physical attractiveness	0.759		
Proximity of location	0.661		
Factor 4: Price			
Merchandise prices	0.826	0.56	12.1%
Special sales/promotions	0.804		

Note: Factors were extracted by using principal component method with a varimax rotation

Factor 1 (eigenvalue 2.07) explains 17.21 percent of the total variance and summarised three of the 12 store attributes: quality of merchandise, variety of selection and brand carried by store. Thus, this factor was consequently labelled “merchandise”. The Cronbach’s alpha for this construct was 0.74, indicating sufficient reliability in terms of internal consistency.

Factor 2 (eigenvalue 1.95) consists of four variables, which explain 16.22 percent of the variance and a Cronbach’s alpha coefficient of 0.62. The factor included the following variables: reputation of store, reputation for fashion,

helpfulness of salespersons and class of clientele. This factor was interpreted as being related to an overall dimension of “reputation” in the consumer’s mind.

Factor 3 (eigenvalue 1.78) consists of three variables and explain 14.85 percent of the variance. It included the following visual-oriented store attributes: merchandise display, physical attractiveness and proximity of location. Thus, this factor was labelled as “attractiveness”. The Cronbach’s alpha for this for this construct was 0.63.

Finally, two variables were identified under factor 4 (eigenvalue 1.45) which explain 12.1 percent of the variance. The variables included merchandise prices and special sales/promotions. Thus, this factor was named “price”. The Cronbach’s alpha for this construct was 0.56. One should keep in mind that the relatively low coefficient alpha rating of this factor can be attributed to the small number of items.

In the following section, the hypotheses testing, which is conducted through the implementation of multivariate analysis of variance (MANOVA) and univariate analysis of variance (ANOVA) outlined in the previous chapter, is presented.

7.3 Testing of Hypothesis 1

This section presents the results of testing the following hypotheses:

H1a: There are significant differences in lifestyle among consumers affiliated with different religions.

H1b: There are significant differences in use of information source among consumers affiliated with different religions.

H1c: There are significant differences in shopping orientation among consumers affiliated with different religions.

H1d: There are significant differences in perceived importance of store attributes among consumers affiliated with different religions.

H1e: There are significant differences in store patronage among consumers affiliated with different religions.

7.3.1 Hypothesis 1a

To test Hypothesis 1a, multivariate analysis of variance (MANOVA) was undertaken using the four lifestyle factors (ethnic conscious, innovativeness, traditional family and fashion conservative) as dependent variables and religious affiliation as an independent variable with four multiple levels: Muslim, Buddhist, Hindu and Christian. Due to disparity in sample size among the four religious groups, Box's M test of homogeneity of variance-covariance assumption was run. The test turned out to be insignificant at the 0.1 level (Box's M = 39.991, F = 1.278, p = 0.142). Therefore there is no reason to believe that the variances in the four religious groups were different.

Table 7.7 MANOVA of lifestyle by religious affiliation

	Value	F	Hypothesis df	Error df	Sig.
Pillai's trace	0.147	2.854	12.000	663.000	0.001
Wilks' lambda	0.857	2.905	12.000	579.711	0.001

Pillai's trace and Wilks' lambda were used to assess the overall multivariate relationship. As shown in Table 7.7, the MANOVA results indicated that religious

affiliation has a significant impact on lifestyles at $p < 0.001$ level (Pillai's trace = 0.147, $F(12, 663) = 2.854$, $p < 0.001$; Wilks' lambda = 0.857, $F(12, 579.711) = 2.905$, $p < 0.001$). The effect size (η^2) of this multivariate relationship was 0.05. Thus, Hypothesis 1a was supported. Significant differences did exist for lifestyles among consumers affiliated with different religions and further testing was needed.

One-way ANOVA tests were conducted for each dependent variable. Prior to interpreting the results, the data was checked for the homogeneity of variance assumption using the Levene's F test. The test showed that the fashion conservative was significant at $p < 0.05$, indicating that the assumption for this variable was not met. Thus, Brown-Forsythe's one-way ANOVA, which does not assume equal variance, was utilised for comparisons between groups for this dependent variable.

Table 7.8 ANOVA of lifestyle by religious affiliation

	F	Sig.
Ethnic conscious	5.521	0.001***
Innovativeness	1.362	0.255
Traditional family	2.998	0.032**
Fashion conservative	4.043	0.009**

** $p < 0.05$; *** $p < 0.01$

The results of one-way ANOVA are displayed in Table 7.8. As reported, statistically religious differences existed in three lifestyle factors, namely ethnic conscious ($F(3, 222) = 5.521$, $p < 0.001$), traditional family ($F(3, 222) = 2.998$, $p < 0.05$) and fashion conservative (Brown-Forsythe's $F(3, 139.15) = 4.043$, $p < 0.01$).

No significant differences among groups were found for innovativeness. The means and standard deviations are reported in Table 7.9.

Table 7.9 Descriptive statistics for lifestyle by religious affiliation

	Muslim	Buddhist	Hindu	Christian
Ethnic conscious	3.80 (0.67)	3.53 (0.56)	3.85 (0.59)	3.38 (0.71)
Innovativeness	2.99 (0.76)	3.07 (0.65)	3.19 (0.66)	2.82 (0.75)
Traditional family	4.20 (0.73)	3.86 (0.71)	4.00 (0.89)	3.98 (0.54)
Fashion conservative	3.65 (0.85)	3.17 (1.11)	3.59 (1.14)	3.09 (1.00)

Pairwise multiple comparison tests were conducted on significant findings to determine in detail these differences. For ethnic conscious and traditional family, the Bonferroni method was employed to perform the post-hoc analysis since Levene's F tests suggested that the error variance of these dependent variables were equal (i.e. homogenous) across groups. For fashion conservative, Tamhane's T2 method for multiple comparison was used since the variable failed the Levene's F test for homogeneity of variance assumption (i.e. the test was significant at $p < 0.05$, indicating that the error variance of the variable was unequal across groups).

For ethnic conscious, significant differences were indicated between Muslims and Christians ($p = 0.008$) and between Hindus and Christians ($p = 0.019$). The cell means indicated that the means of the Islamic and Hinduism followers obtained a higher score ($M_s = 3.8$ and 3.85 respectively) than the mean of the Christianity followers ($M = 3.38$).

For traditional family, a significant difference was found between Muslim and Christian groups ($p = 0.027$). It was found that the mean of the Islamic followers obtained a slightly higher score ($M = 4.2$) than the mean of the Christianity followers ($M = 3.98$).

For fashion conservative, significant differences were found between Muslims and Buddhists ($p = 0.033$) and between Muslims and Christians ($p = 0.041$). The cell means indicated that the means of the Islamic followers obtained a higher score ($M = 3.65$) than the mean of the Buddhism and Christianity followers ($M_s = 3.17$ and 3.09 respectively).

7.3.2 Hypothesis 1b

To test Hypothesis 1b, multivariate analysis of variance (MANOVA) was performed using the two information source factors (media and personal) as dependent variables and religious affiliation as an independent variable with four multiple levels: Muslim, Buddhist, Hindu and Christian. To check whether the homogeneity of variance-covariance assumption is met, Box's M test was run. The test produced non-significant result at $p < 0.1$ level (Box's $M = 9.381$, $F = 1.021$, $p = 0.42$), suggesting that the covariance matrices are roughly equal and the homogeneity assumption is tenable.

Table 7.10 MANOVA of information source by religious affiliation

	Value	F	Hypothesis df	Error df	Sig.
Pillai's trace	0.019	0.712	6.000	444.000	0.640
Wilks' lambda	0.981	0.710	6.000	442.000	0.642

Pillai's trace and Wilks' lambda were used to assess the overall multivariate relationship. The MANOVA results are displayed in Table 7.10. The results indicated that the tests were not significant (Pillai's trace = 0.019, $F(6, 444) = 0.712$, $p > 0.1$; Wilks' lambda = 0.981, $F(6, 442) = 0.71$, $p > 0.1$) with an effect size (η^2) of 0.01. Decision was made that no significant differences in use of information sources among consumers affiliated with different religions, and no further testing was needed. Hypothesis 1b was not supported. The means and standard deviations are reported in Table 7.11.

Table 7.11 Descriptive statistics for information source by religious affiliation

	Muslim	Buddhist	Hindu	Christian
Media	2.41 (0.79)	2.31 (0.78)	2.29 (0.94)	2.38 (0.78)
Personal	2.27 (0.65)	2.46 (0.83)	2.24 (0.67)	2.27 (0.70)

7.3.3 Hypothesis 1c

To test Hypothesis 1c, multivariate analysis of variance (MANOVA) was performed using the six shopping orientation factors (brand conscious, shopping enjoyment,

fashion conscious, quality conscious, impulsive shopping and price conscious) as dependent variables and religious affiliation as an independent variable with four multiple levels: Muslim, Buddhist, Hindu and Christian. To examine whether the assumption of equality of variance-covariance matrices are equal across the four religious groups, Box's M test was run. The test turned out to be insignificant at $p < 0.1$ level (Box's $M = 73.342$, $F = 1.092$, $p = 0.288$), indicating that the covariance matrices are roughly equal and the assumption is tenable.

Table 7.12 MANOVA of shopping orientation by religious affiliation

	Value	F	Hypothesis df	Error df	Sig.
Pillai's trace	0.088	1.102	18.000	657.000	0.345
Wilks' lambda	0.914	1.106	18.000	614.254	0.341

Pillai's trace and Wilks' lambda were used to test statistical significance of the religious affiliation effect. The results are presented in Table 7.12. Contrary to expectation, the results indicated that the tests were not significant (Pillai's trace = 0.088, $F(18, 657) = 1.102$, $p > 0.1$; Wilks' lambda = 0.914, $F(18, 614.254) = 1.106$, $p > 0.1$) with an effect size (η^2) of 0.03. Based on these results, decision was made that there were no significant differences in shopping orientations among consumers affiliated with different religions. Based on these results, Hypothesis 1c was rejected. Since only non-significant results were produced by the MANOVA, no further testing was made. The means and standard deviations are reported in Table 7.13.

Table 7.13 Descriptive statistics for shopping orientation by religious affiliation

	Muslim	Buddhist	Hindu	Christian
Brand conscious	3.00 (0.85)	2.89 (0.86)	3.04 (0.90)	2.71 (0.89)
Shopping enjoyment	3.39 (0.74)	3.17 (0.80)	3.11 (0.96)	3.23 (0.92)
Fashion conscious	2.76 (0.82)	2.75 (0.81)	2.99 (0.76)	2.70 (0.93)
Quality conscious	3.90 (0.70)	3.71 (0.69)	3.75 (0.69)	3.81 (0.72)
Impulsive shopping	2.95 (0.86)	3.10 (0.91)	3.22 (0.75)	3.06 (0.99)
Price conscious	3.74 (0.68)	3.64 (0.75)	3.45 (0.74)	3.65 (0.88)

7.3.4 Hypothesis 1d

To test Hypothesis 1d, multivariate analysis of variance (MANOVA) was performed using the four store attribute factors (merchandise, reputation, attractiveness and price) as dependent variables and religious affiliation as an independent variable with four multiple levels: Muslim, Buddhist, Hindu and Christian. To examine whether the assumption of equality of variance-covariance matrices are equal across the four religious groups, Box's M test was run. The test turned out to be insignificant at the 0.1 level (Box's M = 34.385, F = 1.098, p = 0.325), suggesting that the covariance matrices are roughly equal and the assumption is tenable.

Table 7.14 MANOVA of store attributes by religious affiliation

	Value	F	Hypothesis df	Error df	Sig.
Pillai's trace	0.174	3.397	12.000	663.000	0.000
Wilks' lambda	0.829	3.547	12.000	579.711	0.000

As documented in Table 7.14, results of the MANOVA indicated a significant overall effect of religious affiliation on store attribute importance (Pillai's trace = 0.174, $F(12, 663) = 3.387$, $p < 0.001$; Wilks' lambda = 0.829, $F(12, 579.711) = 3.547$, $p < 0.001$). This provides empirical support for Hypothesis 1d. There were significant differences in importance ratings of store attribute factors among consumers affiliated with different religions. The effect size (η^2) of this multivariate relationship was 0.061.

Statistically significant MANOVA results were followed up with univariate ANOVA tests for each dependent variable to examine whether the four religious groups have distinctively different evaluation of the four store attribute factors. The Levene's statistic was not significant at $p < 0.05$ level for all four store attributes, suggesting that the data meet the homogeneity of variance assumption.

Table 7.15 ANOVA of store attributes by religious affiliation

	F	Sig.
Merchandise	1.271	0.285
Reputation	3.582	0.015**
Attractiveness	1.393	0.246
Price	10.183	0.000***

** $p < 0.05$; *** $p < 0.01$

The results of one-way ANOVA are displayed in Table 7.15. Statistically, religious differences existed in the level of importance group members attached to two store attributes. Those two attributes of significant difference included store reputation

($F(3, 222) = 3.582, p < 0.05$) and price ($F(3, 222) = 10.183, p < 0.001$). No significant differences were noted with regards to the groups' perceived importance of merchandise and store attractiveness. The means and standard deviations are reported in Table 7.16.

Table 7.16 Descriptive statistics for store attributes by religious affiliation

	Muslim	Buddhist	Hindu	Christian
Merchandise	3.43 (0.84)	3.25 (0.72)	3.19 (1.00)	3.20 (1.00)
Reputation	4.34 (0.50)	4.10 (0.43)	4.17 (0.56)	4.17 (0.39)
Attractiveness	2.98 (0.80)	3.15 (0.84)	3.29 (0.75)	3.06 (0.92)
Price	4.09 (0.60)	3.56 (0.73)	3.91 (0.47)	3.78 (0.63)

Tests of paired comparisons were conducted on significant findings to assess whether there were significant differences in the means of the store attributes across the four religious groups. The Bonferroni method for multiple comparison was employed to perform the post-hoc analysis since Levene's F test indicated that the error variance of the dependent variable was equal across the four groups of religion.

For reputation, a significant difference was found between Muslims and Buddhists ($p = 0.015$). As reported in Table 7.16, Muslims rated the store reputation slightly higher than Buddhists ($M_s = 4.34$ for Muslims and 4.1 for Buddhists). Similarly, a significant contrast was found between Muslims and Buddhists for store attribute related to price ($p = 0.000$). The mean of the Islamic followers showed a greater score ($M = 4.09$) than the mean of the Buddhism followers ($M = 3.56$).

7.3.5 Hypothesis 1e

To test Hypothesis 1e, multivariate analysis of variance (MANOVA) was performed using religious affiliation as an independent variable with four multiple levels: Muslim, Buddhist, Hindu and Christian and the five store format (hypermarket, department store, specialty department, specialty store and catalogue) as dependent variables. Prior to interpreting the result, the assumption of homogeneity of variance-covariance matrices was examined using the Box's M test. The test produced non-significant result (Box's M = 55.49, F = 1.169, p = 0.203), suggesting that the assumption was not violated. Thus there is no reason to believe that the variances in the four religious groups were different.

Pillai's trace and Wilks' lambda were used to assess the overall multivariate relationship. The MANOVA results, as displayed in Table 7.17, indicated that there was a statistically significant difference in store patronage (Pillai's trace = 0.132, F (15, 660) = 2.022, p < 0.05; Wilks' lambda = 0.873, F (15, 602.203) = 2.021, p < 0.05. The effect size (η^2) of this multivariate relationship was 0.044. Hypothesis 1e was supported. There were significant differences in store patronage among consumers affiliated with different religions, and further testing was needed.

Table 7.17 MANOVA of store patronage by religious affiliation

	Value	F	Hypothesis df	Error df	Sig.
Pillai's trace	0.132	2.022	15.000	660.000	0.012
Wilks' lambda	0.873	2.021	15.000	602.203	0.012

As a follow-up analysis, one-way ANOVA was conducted for each dependent variable to examine whether the four religious groups were differed from one another in their store patronage. The Levene's statistic was significant at $p < 0.05$ for the specialty department store, suggesting that the homogeneity of variance assumption was violated. Thus, Brown-Forsythe's one-way ANOVA, which does not assume equal variance, was utilised for comparisons between groups for this dependent variable. The results of ANOVA tests are summarised in Table 7.18.

Table 7.18 ANOVA of store patronage by religious affiliation

	F	Sig.
Hypermarket	1.398	0.244
Department	1.209	0.307
Specialty department	4.999	0.003**
Specialty	1.362	0.355
Catalogue	0.923	0.430

** $p < 0.01$

The results point to statistically significant differences across the four religious groups with respect to patronage of specialty department store (Brown-Forsythe's $F(3, 129.93) = 4.999, p < 0.01$). There were no significant differences across religious groups for hypermarket, department store, specialty store and catalogue shopping. The means and standard deviations are reported in Table 7.19.

Table 7.19 Descriptive statistics for store patronage by religious affiliation

	Muslim	Buddhist	Hindu	Christian
Hypermarket	2.92 (1.08)	2.75 (1.21)	2.56 (1.13)	2.56 (1.08)
Department	3.34 (1.02)	3.51 (0.95)	3.56 (0.86)	3.19 (0.86)
Specialty department	2.65 (0.99)	2.11 (1.05)	2.79 (1.30)	2.19 (0.86)
Specialty	2.39 (1.00)	2.40 (1.03)	2.76 (1.21)	2.56 (0.72)
Catalogue	2.15 (1.18)	1.86 (0.88)	2.00 (0.95)	2.00 (1.02)

Since Levene's F test indicated that the error variance of the dependent variable was unequal across the three religious groups, Tamhane's T2 method for multiple comparison was employed to perform the post-hoc analysis. The results indicated that Muslims differ significantly from Buddhists in patronising specialty department store ($p = 0.01$). As reported in Table 7.19, the Muslim group had a higher number of visits to this type of retail store than did the Buddhist group ($M_s = 2.65$ for Muslims and 2.11 for Buddhists).

7.4 Testing of Hypothesis 2

Having tested the first hypothesis, attention is now turned to Hypothesis 2. This section presents the results of testing the following hypotheses:

- H2a: There are significant differences in lifestyle among consumers with different levels of religiosity.
- H2b: There are significant differences in use of information source among consumers with different levels of religiosity.
- H2c: There are significant differences in shopping orientation among consumers with different levels of religiosity.

H2d: There are significant differences in perceived importance of store attributes among consumers with different levels of religiosity.

H2e: There are significant differences in store patronage among consumers with different levels of religiosity.

In testing the above hypotheses, the religiosity construct was viewed from two perspectives: intrapersonal religiosity and interpersonal religiosity. For the purpose of group comparison, the respondents were classified as low, medium and high intrapersonal religiosity and as low, medium and high interpersonal religiosity based on their total scores on both scales. A general rule of 33% (low), 33% (medium) and 33% (high) split was used to classify the scores of each scale into three levels. According to the frequency distributions, intrapersonal religiosity was classified into low (n = 67, 29.6%), medium (n = 76, 33.6%) and high (n = 83, 36.7%). By applying the same procedure, interpersonal religiosity was classified into low (n = 81, 35.8%), medium (n = 52, 23%) and high (n = 93, 41.2%).

7.4.1 Hypothesis 2a

To test Hypothesis 2a, a two-way multivariate analysis of variance (MANOVA) was performed on four dependent variables: ethnic conscious, innovativeness, traditional family and fashion conservative. Categorical independent variables were intrapersonal religiosity (low, medium and high) and interpersonal religiosity (low, medium and high). To examine whether the assumption of equality of variance-covariance matrices are equal across the four religious groups, Box's M test was run. The test turned out to be insignificant at $p < 0.05$ level (Box's M = 110.662, F = 1.258, $p = 0.06$), suggesting that the covariance matrices are roughly equal and the assumption is tenable. Pillai's

trace and Wilks' lambda were used to test statistical significance of the main and interaction effects.

Table 7.20 MANOVA of lifestyle by religiosity

	Value	F	Hypothesis df	Error df	Sig.
Intrapersonal religiosity					
Pillai's trace	0.109	3.083	8.000	430.000	0.002
Wilks' lambda	0.892	3.147	8.000	428.000	0.002
Interpersonal religiosity					
Pillai's trace	0.069	1.926	8.000	430.000	0.055
Wilks' lambda	0.932	1.919	8.000	428.000	0.056
Intrapersonal*Interpersonal					
Pillai's trace	0.145	2.038	16.000	868.000	0.009
Wilks' lambda	0.861	2.047	16.000	654.418	0.009

The results of two-way MANOVA tests are documented in Table 7.20. Based on the results, Hypothesis 2a was accepted in that the combined dependent variables were significantly affected by both intrapersonal religiosity (Pillai's trace = 0.109, $F(8, 430) = 3.083$, $p < 0.01$; Wilks' lambda = 0.892, $F(8, 428) = 3.147$, $p < 0.01$) and interpersonal religiosity (Pillai's trace = 0.069, $F(8, 430) = 1.926$, $p < 0.1$; Wilks' lambda = 0.932, $F(8, 428) = 1.919$, $p < 0.1$). Results of the MANOVA also indicate, in addition to the main effects, the two-way interaction between intrapersonal and interpersonal religiosity was statistically significant (Pillai's trace = 0.145, $F(16, 868) = 2.038$, $p < 0.01$; Wilks' lambda = 0.861, $F(16, 654.418) = 2.047$, $p < 0.01$). Overall,

the effect size of intrapersonal religiosity ($\eta^2 = 0.056$) was much larger than that of interpersonal religiosity ($\eta^2 = 0.035$) and the interaction between them ($\eta^2 = 0.037$).

To investigate which dependent variables are responsible for the statistically significant MANOVA results, two-way ANOVA was conducted for each of the dependent variables. The Levene's tests for homogeneity of variance assumption for the four dependent variables were non-significant ($p > 0.05$), indicating that the data meet the assumption.

As can be seen in Table 7.21, the main effect of intrapersonal religiosity was found to be statistically significant on the following lifestyle factors: ethnic conscious ($F(2, 217) = 2.426, p < 0.1$), traditional family ($F(2, 217) = 8.114, p < 0.01$) and fashion conservative ($F(2, 217) = 6.35, p < 0.01$). The results also indicate a significant main effect of interpersonal religiosity on the following lifestyle factors: innovativeness ($F(2, 217) = 3.085, p < 0.05$), traditional family ($F(2, 217) = 2.698, p < 0.1$) and fashion conservative ($F(2, 217) = 2.993, p < 0.05$). At the same time, the two-way interactions of intrapersonal religiosity and interpersonal religiosity proved to have a statistically effect on traditional family ($F(4, 217) = 3.17, p < 0.05$) and fashion conservative ($F(4, 217) = 2.7, p < 0.05$). No significant interaction effects of independent variables were evidenced for ethnic conscious and innovativeness.

Table 7.21 ANOVA of lifestyles by religiosity

	SS	df	MS	F	Sig.
Ethnic conscious					
Intrapersonal (intra)	1.995	2	0.997	2.426	0.091*
Interpersonal (inter)	0.872	2	0.436	1.061	0.348
Intra*inter	2.672	4	0.668	1.625	0.169
Error	89.209	217	0.411		
Innovativeness					
Intrapersonal (intra)	0.019	2	0.010	0.019	0.981
Interpersonal (inter)	3.140	2	1.570	3.085	0.048**
Intra*inter	3.333	4	0.833	1.637	0.166
Error	110.432	217	0.509		
Traditional family					
Intrapersonal (intra)	6.977	2	3.489	8.114	0.000***
Interpersonal (inter)	2.320	2	1.160	2.698	0.070*
Intra*inter	5.458	4	1.364	3.173	0.015**
Error	93.298	217	0.430		
Fashion conservative					
Intrapersonal (intra)	11.219	2	5.610	6.350	0.002***
Interpersonal (inter)	5.287	2	2.644	2.993	0.052**
Intra*inter	9.551	4	2.388	2.703	0.031**
Error	191.692	217	0.883		

* $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$

Post-hoc multiple comparisons were conducted to examine the between-group differences among the three intrapersonal religiosity groups. For ethnic conscious and fashion conservative, the Bonferroni method was employed since Levene's F test indicated that the error variance of these dependent variables was equal across the three groups of intrapersonal religiosity. For traditional family, Tamhane's T2 test for

multiple comparison was used since this variable failed the Levene's F test for homogeneity of variance assumption. The means and standard deviations are reported in Table 7.22.

For ethnic conscious, a significant difference was found between low and high groups ($p = 0.003$). The high religiosity group ($M = 3.83$) had higher score than the low group ($M = 3.48$). No significant differences were indicated between low and medium and between low and high groups.

For traditional family, the significant contrasts existed between low and medium ($p = 0.000$), between low and high ($p = 0.000$) and between medium and high ($p = 0.043$) groups. By comparison, the high religiosity group ($M = 4.36$) scored higher than the low group ($M = 3.63$) while the medium group ($M = 4.1$) was intermediate between the two.

For fashion conservative, significant differences were found between low and medium ($p = 0.037$), between low and high ($p = 0.000$) and between medium and high ($p = 0.032$) groups. By comparison, the high religiosity group ($M = 3.81$) had higher score than the low group ($M = 3.01$) while the medium group ($M = 3.41$) was intermediate between the two.

Table 7.22 Descriptive statistics for lifestyle by intrapersonal religiosity

	Low	Medium	High
Ethnic conscious	3.48 (0.62)	3.70 (0.58)	3.83 (0.72)
Innovativeness	3.00 (0.79)	3.01 (0.59)	3.05 (0.78)
Traditional conscious	3.63 (0.77)	4.10 (0.71)	4.36 (0.55)
Fashion conservative	3.01 (1.04)	3.41 (0.55)	3.81 (0.91)

A similar analysis was undertaken to examine the between-group differences among the three interpersonal religiosity groups. The Bonferroni method was employed to perform the post-hoc analysis for ethnic conscious, innovativeness and fashion conservative since Levene's F tests indicated that the error variance of these dependent variables were relatively equal across groups. For traditional conscious, Tamhane's T2 for multiple comparison was used since this variable failed the Levene's F test for homogeneity of variance assumption (i.e. the error variance of the variable was unequal across groups). The means and standard deviations are presented in Table 7.23.

Table 7.23 Descriptive statistics for lifestyle by interpersonal religiosity

	Low	Medium	High
Ethnic conscious	3.52 (0.70)	3.68 (0.57)	3.82 (0.64)
Innovativeness	2.87 (0.77)	3.17 (0.60)	3.06 (0.72)
Traditional conscious	3.81 (0.81)	3.99 (0.67)	4.30 (0.62)
Fashion conservative	3.25 (1.02)	3.24 (1.01)	3.72 (0.94)

For ethnic conscious, a significant difference was indicated between low and high groups ($p = 0.009$). The high religiosity group had higher score ($M = 3.82$) than the low group ($M = 3.52$). No significant differences were indicated between low and medium and between medium and high groups.

For traditional conscious, significant differences were found between low and high ($p = 0.000$) and between medium and high ($p = 0.019$) groups. It was observed that the high religiosity group had higher score ($M = 4.3$) than the other two groups

($M_s = 3.81$ for low and 3.99 for medium). No significant difference was indicated between low and medium groups.

Similarly, for fashion conservative, significant differences were found between low and high ($p = 0.006$) and between medium and high ($p = 0.018$) groups. The high religiosity group had higher score ($M = 3.72$) than the other two groups ($M_s = 3.25$ for low and 3.24 for medium). No significant difference was indicated between low and medium groups.

7.4.2 Hypothesis 2b

To test Hypothesis 2b, a two-way multivariate analysis of variance (MANOVA) was initially performed on two dependent variables: media source and personal source. Categorical independent variables were intrapersonal religiosity (low, medium and high) and interpersonal religiosity (i.e. low, medium and high). To check whether the homogeneity of variance-covariance assumption is met, Box's M test was run. The test produced non-significant result at $p > 0.1$ level (Box's $M = 33.329$, $F = 1.328$, $p = 0.131$), suggesting that the covariance matrices were roughly equal and the assumption was not violated.

Pillai's trace and Wilks' lambda were used to test statistical significance of the main and interaction effects. Based on the results displayed in Table 7.24, Hypothesis 2b was accepted. The combined dependent variables were significantly affected by both intrapersonal religiosity (Pillai's trace = 0.04 , $F(4, 434) = 2.235$, $p < 0.1$; Wilks' lambda = 0.96 , $F(4, 432) = 2.241$, $p < 0.01$) and interpersonal religiosity (Pillai's trace = 0.172 , $F(4, 434) = 10.229$, $p < 0.001$; Wilks' lambda = 0.829 , $F(4, 432) = 10.65$, $p < 0.001$). The interaction effects between these two independent variables

were also found to be significant (Pillai's trace = 0.172, $F(8, 434) = 2.871$, $p < 0.01$; Wilks' lambda = 0.901, $F(8, 432.418) = 2.881$, $p < 0.001$). Overall, the effect size of interpersonal religiosity ($\eta^2 = 0.09$) was larger than that of intrapersonal religiosity ($\eta^2 = 0.02$) and the interaction between them ($\eta^2 = 0.051$).

Table 7.24 MANOVA of information source by religiosity

	Value	F	Hypothesis df	Error df	Sig.
Intrapersonal religiosity					
Pillai's trace	0.040	2.235	4.000	434.000	0.064
Wilks' lambda	0.960	2.241	4.000	432.000	0.064
Interpersonal religiosity					
Pillai's trace	0.172	10.229	4.000	434.000	0.000
Wilks' lambda	0.829	10.650	4.000	432.000	0.000
Intrapersonal*Interpersonal					
Pillai's trace	0.101	2.871	8.000	434.000	0.004
Wilks' lambda	0.901	2.881	8.000	432.418	0.004

To investigate which dependent variables are responsible for the statistically significant MANOVA results, two-way ANOVA tests were conducted for each of the dependent variables. The Levene's tests for homogeneity of variance assumption for the two dependent variables were non-significant ($p > 0.05$), indicating that the data meet the assumption.

Table 7.25 ANOVA of information source by religiosity

	SS	df	MS	F	Sig.
Media					
Intrapersonal (intra)	4.256	2	2.128	3.467	0.033**
Interpersonal (inter)	0.803	2	0.401	0.654	0.521
Intra*inter	4.356	4	1.089	1.774	0.135
Error	133.176	217	0.614		
Personal					
Intrapersonal (intra)	0.649	2	0.325	0.781	0.459
Interpersonal (inter)	18.087	2	9.044	21.751	0.000***
Intra*inter	6.299	4	1.575	3.788	0.005***
Error	90.222	217	0.416		

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

A summary of the two-way ANOVA results is provided in Table 7.25. For media source, the main effect of intrapersonal religiosity was found to be statistically significant ($F(2, 217) = 3.467, p < 0.05$); the main effect of interpersonal religiosity and the interaction effect were not. On the other hand, the two-way ANOVA results for personal source indicates a significant main effect of interpersonal religiosity ($F(2, 217) = 21.751, p < 0.01$). Intrapersonal religiosity was not significant as a main effect but did have a significant interaction with interpersonal religiosity in affecting personal source ($F(4, 217) = 3.788, p < 0.01$).

Post-hoc multiple comparisons were conducted to examine the between group differences among the three intrapersonal religiosity groups. The Bonferroni method was employed to perform the post-hoc analysis since Levene's F tests confirmed that

the error variance of the dependent variables were relatively equal across groups. The means and standard deviations are reported in Table 7.26.

A significant difference was indicated between low and high groups ($p = 0.001$) for media source. The high religiosity group had higher score ($M = 2.59$) than the low group ($M = 2.13$). No significant differences were indicated between low and medium and between medium and high groups.

Table 7.26 Descriptive statistics for information source by intrapersonal religiosity

	Low	Medium	High
Media	2.13 (0.72)	2.32 (0.73)	2.59 (0.88)
Personal	2.33 (0.75)	2.23 (0.69)	2.26 (0.70)

A similar analysis was undertaken to examine the between-group differences among the three interpersonal religiosity groups. For both media and personal sources, the Bonferroni method was employed to perform the post-hoc analysis since Levene's F tests confirmed that the error variance of these dependent variables were relatively equal across groups. The mean scores and standard deviations are presented in Table 7.27.

Significant differences were found between low and high ($p = 0.000$) and between medium and high ($p = 0.002$) groups for personal source. By comparison, the high religiosity group had higher score ($M = 2.61$) than the other two groups ($M_s = 2.03$ for low and 2.21 for medium). No significant difference was observed between low and medium groups.

Table 7.27 Descriptive statistics for information source by interpersonal religiosity

	Low	Medium	High
Media	2.23 (0.76)	2.45 (0.76)	2.43 (0.86)
Personal	2.03 (0.72)	2.21 (0.54)	2.61 (0.68)

7.4.3 Hypothesis 2c

To test Hypothesis 2c, a two-way multivariate analysis of variance (MANOVA) was performed on six dependent variables: brand conscious, shopping enjoyment, fashion conscious, quality conscious, impulsive shopping and price conscious. Categorical independent variables were intrapersonal religiosity (low, medium and high) and interpersonal religiosity (low, medium and high). Before the results can be interpreted, Box's M test was run to check whether the homogeneity of variance-covariance assumption is met. The test was found to be insignificant at $p < 0.05$ level (Box's M = 228.502, $F = 1.173$, $p = 0.063$), suggesting that the covariance matrices were equal and the assumption was not violated.

The two-way MANOVA results are presented in Table 7.28. The results indicated that the combined dependent variables were significantly affected by both intrapersonal religiosity (Pillai's trace = 0.159, $F(12, 426) = 3.067$, $p < 0.001$; Wilks' lambda = 0.843, $F(12, 424) = 3.152$, $p < 0.001$) and interpersonal religiosity (Pillai's trace = 0.178, $F(12, 426) = 3.464$, $p < 0.001$; Wilks' lambda = 0.829, $F(12, 424) = 3.472$, $p < 0.001$) but not by their interaction (Pillai's trace = 0.133, $F(24, 860) = 1.233$, $p > 0.1$; Wilks' lambda = 0.873, $F(24, 740.79) = 1.23$, $p > 0.1$). The effect sizes of these two independent variables were almost equal with $\eta^2 = 0.082$ for

intrapersonal religiosity and $\eta^2 = 0.089$ for interpersonal religiosity. Based on these results, Hypothesis 2c was supported. There were significant differences in shopping orientation among consumers with different levels of religiosity.

Table 7.28 MANOVA of shopping orientation by religiosity

	Value	F	Hypothesis df	Error df	Sig.
Intrapersonal religiosity					
Pillai's Trace	0.159	3.067	12.000	426.000	0.001
Wilks' Lambda	0.843	3.152	12.000	424.000	0.001
Interpersonal religiosity					
Pillai's Trace	0.178	3.464	12.000	426.000	0.001
Wilks' Lambda	0.829	3.472	12.000	424.000	0.001
Intrapersonal*Interpersonal					
Pillai's Trace	0.133	1.233	24.000	860.000	0.203
Wilks' Lambda	0.873	1.230	24.000	740.790	0.206

A one-way ANOVA was used to explore the univariate effect of intrapersonal religiosity on shopping orientations. Prior to interpreting the results, the data was checked for the homogeneity of variance assumption using the Levene's F test. The test showed that the quality conscious and price conscious were both significant at $p < 0.05$, indicating that the assumptions for these variables were violated. For this reason, Brown-Forsythe's one-way ANOVA, which does not assume equal variance, was utilised for comparisons between groups for these two dependent variables.

The results of one-way ANOVA are displayed in Table 7.29. Statistically significant differences existed in three of the six shopping orientations examined here.

Those three orientations included quality conscious (Brown-Forsythe's $F(2, 186.78) = 11.898, p < 0.001$), impulsive shopping ($F(2, 223) = 12.468, p < 0.001$) and price conscious (Brown-Forsythe's $F(2, 212.9) = 11.599, p < 0.001$). The results indicated no significant differences among groups for brand conscious, shopping enjoyment and fashion conscious orientations. The means and standard deviations for the six shopping orientation factors are documented in Table 7.30.

Table 7.29 ANOVA of shopping orientation by intrapersonal religiosity

	F	Sig.
Brand conscious	0.393	0.676
Shopping enjoyment	1.600	0.204
Fashion conscious	0.085	0.919
Quality conscious	11.898	0.000***
Impulsive shopping	12.468	0.000***
Price conscious	11.599	0.000***

*** $p < 0.01$

Table 7.30 Descriptive statistics for shopping orientation by intrapersonal religiosity

	Low	Medium	High
Brand conscious	2.88 (0.90)	3.00 (0.87)	2.92 (0.83)
Shopping enjoyment	3.18 (0.81)	3.21 (0.85)	3.39 (0.80)
Fashion conscious	2.76 (0.83)	2.78 (0.83)	2.81 (0.83)
Quality conscious	3.55 (0.80)	3.75 (0.61)	4.08 (0.70)
Impulsive shopping	3.29 (0.79)	3.22 (0.91)	3.68 (0.80)
Price conscious	3.34 (0.64)	3.67 (0.80)	3.90 (0.66)

Post-hoc pairwise comparisons were conducted on significant findings to determine in detail these differences. For impulsive shopping, the Bonferroni method was employed to perform the post-hoc analysis since Levene's F tests confirmed that the error variance of these dependent variables were relatively equal across groups. For quality conscious and price conscious, Tamhane's T2 for multiple comparison was used since these variables failed the Levene's F test for homogeneity of variance assumption (i.e. the error variance of the variable was unequal across groups).

For quality conscious, the significant contrast existed between low and high ($p = 0.000$) and between medium and high ($p = 0.002$) groups. Subjects in high religiosity group appeared to exhibit a substantially higher quality consciousness than the low and medium groups ($M_s = 4.01$ for high, 3.75 for medium and 3.53 for low).

In relation to impulsive shopping, significant differences were found between low and high ($p = 0.000$) and between medium and high ($p = 0.000$) groups. Subjects with a high level of intrapersonal religiosity appeared to exhibit less shopping impulsiveness than the other two groups ($M_s = 2.68$ for high, 3.22 for medium and 3.29 for low). However no significant contrast was observed between low and medium groups.

For price conscious orientation, significant differences were found between low and medium ($p = 0.022$) and between low and high ($p = 0.000$) groups. Subjects in low religiosity group appeared to exhibit a lower price consciousness than their counterparts in medium and high religiosity groups ($M_s = 3.34$ for low, 3.67 for medium and 3.9 for high). No significant difference was observed between medium and high groups.

A one-way ANOVA also was performed to examine the effect of interpersonal religiosity on shopping orientations. Prior to interpreting the results, the assumption of homogeneity of variance for the six dependent variables was tested. The test revealed that only one measure of dependent variable, quality conscious, failed the Levene's F test for homogeneity of variance assumption at $p < 0.05$ level. Thus, for this variable, comparisons between groups were made based on Brown-Forsythe's one-way ANOVA which does not assume equal variance.

Table 7.31 ANOVA of shopping orientation by interpersonal religiosity

	F	Sig.
Brand conscious	3.333	0.037**
Shopping enjoyment	1.087	0.339
Fashion conscious	3.193	0.043**
Quality conscious	11.906	0.000***
Impulsive shopping	8.555	0.000***
Price conscious	16.110	0.000***

** $p < 0.05$, *** $p < 0.01$

Table 7.31 provides a summary of the one-way ANOVA results of the effect of interpersonal religiosity on shopping orientations. As expected, significant differences among groups were found in five of the shopping orientations. Those of significant difference are the brand conscious ($F(2, 223) = 3.333, p < 0.05$), fashion conscious ($F(2, 223) = 3.193, p < 0.05$), quality conscious (Brown-Forsythe's $F(2, 180.6) = 11.906, p < 0.001$), impulsive shopping ($F(2, 223) = 8.555, p < 0.001$) and price conscious ($F(2, 223) = 16.11, p < 0.001$). The F-ratio for the price conscious

variable was highly significant, indicating strong differences in the level of price consciousness among the three religious groups. No differences among groups are indicated for the shopping enjoyment orientation.

Accordingly, post-hoc pairwise comparisons were conducted on significant findings in order to assess mean differences between groups. For brand conscious, fashion conscious, impulsive shopping and price conscious orientations, the Bonferroni method was employed to perform the post-hoc analysis since Levene's F tests confirmed that the error variance of these dependent variables were relatively equal across groups. For quality conscious, Tamhane's T2 method for multiple comparison was used since the variable failed the Levene's F test for homogeneity of variance assumption (i.e. the error variance of the variable was unequal across groups). The mean scores and standard deviations are presented in Table 7.32.

Table 7.32 Descriptive statistics for shopping orientation by interpersonal religiosity

	Low	Medium	High
Brand conscious	2.81 (0.95)	3.20 (0.85)	2.90 (0.77)
Shopping enjoyment	3.17 (0.86)	3.37 (0.76)	3.30 (0.81)
Fashion conscious	2.66 (0.81)	3.02 (0.79)	2.76 (0.84)
Quality conscious	3.53 (0.81)	3.93 (0.64)	4.00 (0.52)
Impulsive shopping	3.16 (0.84)	3.34 (0.81)	2.77 (0.88)
Price conscious	3.34 (0.75)	3.66 (0.67)	3.94 (0.65)

For brand conscious, significance differences were observed between low and medium groups ($p = 0.038$). Subjects in the medium group appeared to exhibit higher level of brand consciousness than the low group ($M_s = 3.2$ for medium and 2.81 for

low). The high group was intermediate in this regard ($M = 2.9$) but not significantly different from either low or high groups.

With respect to fashion conscious orientation, a significant difference was found between low and medium groups ($p = 0.039$). The cell means indicate that subjects in the medium group exhibited higher level of fashion consciousness than those in the low group ($M_s = 3.02$ for medium and 2.66 for low). The high group was intermediate in this regard ($M = 2.76$) and not significantly different from either low or high groups.

In relation to quality conscious, a significant difference was found between low and medium ($p = 0.006$) and between low and high groups ($p = 0.000$). By comparison, subjects in the high and medium groups appeared to exhibit a higher level of quality consciousness than subjects in the low group ($M_s = 4.00$ for high, 3.93 for medium and 3.53 for low). No significant difference was observed between medium and high groups.

As with impulsive shopping, significance differences were indicated between low and high ($p = 0.01$) and between medium and high ($p = 0.000$) groups. An examination of the mean scores show that subjects in the high group appeared to exhibit lower level of shopping impulsiveness ($M = 2.77$) than the other two groups ($M_s = 3.34$ for medium and 3.16 for low). No significant difference was observed between low and medium groups.

Finally, for price conscious orientation, significant differences were found between low and medium ($p = 0.028$) and between low and high ($p = 0.000$) groups. The cell means indicate that subjects in the high group exhibited higher level of price consciousness ($M = 3.94$) than their counterparts in the low group ($M = 3.34$).

Medium group was intermediate in this regard ($M = 3.66$) but not significantly different from the high group.

7.4.4 Hypothesis 2d

To test Hypothesis 2d, a two-way multivariate analysis of variance (MANOVA) was performed on six dependent variables: merchandise, reputation, attractiveness and price. Categorical independent variables were intrapersonal religiosity (low, medium and high) and interpersonal religiosity (low, medium and high). To check whether the homogeneity of variance-covariance assumption is met, Box's M test was run. The test produced non-significant result (Box's $M = 98.892$, $F = 1.124$, $p = 0.21$), suggesting that the covariance matrices were equal and the homogeneity assumption was tenable.

Table 7.33 MANOVA of store attributes by religiosity

	Value	F	Hypothesis df	Error df	Sig.
Intrapersonal religiosity					
Pillai's trace	0.203	6.074	8.000	430.000	0.000
Wilks' lambda	0.801	6.294	8.000	428.000	0.000
Interpersonal religiosity					
Pillai's trace	0.174	5.116	8.000	430.000	0.000
Wilks' lambda	0.832	5.142	8.000	428.000	0.000
Intrapersonal*Interpersonal					
Pillai's trace	0.070	0.972	16.000	868.000	0.486
Wilks' lambda	0.931	0.971	16.000	654.418	0.487

As showed in Table 7.33, the results confirmed that the combined dependent variables were significantly affected by both intrapersonal religiosity (Pillai's trace = 0.203, $F(8, 430) = 6.074$, $p < 0.001$; Wilks' lambda = 0.801, $F(8, 428) = 6.294$, $p < 0.001$) and interpersonal religiosity (Pillai's trace = 0.174, $F(8, 430) = 5.116$, $p < 0.001$; Wilks' lambda = 0.832, $F(8, 428) = 5.142$, $p < 0.001$). The interaction effect between these two independent variables were not found to be significant (Pillai's trace = 0.07, $F(16, 868) = 0.972$, $p > 0.1$; Wilks' lambda = 0.931, $F(16, 654.418) = 0.971$, $p > 0.1$). Overall, the effect size of intrapersonal religiosity ($\eta^2 = 0.105$) was much larger than that of interpersonal religiosity ($\eta^2 = 0.088$). Thus, Hypothesis 2d was substantiated. There were significant differences in perceived importance of store attributes among consumers with different levels of religiosity.

A one-way ANOVA was conducted to examine whether the three religiosity groups have distinctively different evaluation of store attributes. Prior to interpreting the results, the assumption of homogeneity of variance for the dependent variables was tested. The Levene's F test showed that, for the four dependent variables, none were significant, suggesting that that the data meet the homogeneity of variance assumption.

The one-way ANOVA results for the intrapersonal religiosity effects on perceived importance of store attributes are given in Table 7.34. The results revealed statistically significant differences in the groups' perceived importance of all four attributes under examination: merchandise ($F(2, 223) = 14.952$, $p < 0.001$), reputation ($F(2, 223) = 14.342$, $p < 0.001$), attractiveness ($F = 13.145$, $p < 0.001$) and price ($F(2, 223) = 12.6$, $p < 0.001$). It should be noted that, in general, F-ratios for all four attributes were large, indicating that the three groups were clearly different from each

other. The means and standard deviations for store attributes by intrapersonal religiosity are reported in Table 7.35.

Table 7.34 ANOVA of store attributes by intrapersonal religiosity

	F	Sig.
Merchandise	14.952	0.000***
Reputation	14.342	0.000***
Attractiveness	13.145	0.000***
Price	12.600	0.000***

*** p < 0.01

Table 7.35 Descriptive statistics for store attributes by intrapersonal religiosity

	Low	Medium	High
Merchandise	2.94 (0.82)	3.28 (0.76)	3.65 (0.81)
Reputation	3.99 (0.48)	4.25 (0.41)	4.40 (0.49)
Attractiveness	3.34 (0.77)	3.23 (0.86)	3.74 (0.72)
Price	3.60 (0.66)	3.88 (0.62)	4.13 (0.61)

Pairwise multiple comparison tests were conducted on significant findings to determine in detail these differences. Since Levene's F test indicated that the error variance of the dependent variable was equal (i.e. homogenous) across the three religious groups, the Bonferroni method, which assumes equal variance, was employed to perform the post-hoc analysis.

For merchandise, significant differences were found between low and medium ($p = 0.038$), between low and high ($p = 0.000$) and between medium and high ($p =$

0.01) groups. The high religiosity group had higher score than the low group while medium group was intermediate between the two ($M_s = 3.65$ for high, 3.28 for medium and 2.94 for low).

For reputation, significant differences were found between low and medium ($p = 0.003$) and between low and high ($p = 0.000$) groups. No significant difference was indicated between medium and high groups. As indicated by mean scores, consumers in medium and high groups viewed reputation as being greater importance in selecting a retail store than did those in the low group ($M_s = 4.4$ for high, 4.25 for medium and 3.99 for low).

For attractiveness, significant differences were found between low and high ($p = 0.000$) and between medium and high ($p = 0.000$) groups. Comparing the three groups, both low and medium groups had higher scores than the high group ($M_s = 3.34$ for low, 3.23 for medium and 2.74 for high). No significant difference was indicated between low and medium groups.

With respect to price, significant differences were found between low and medium ($p = 0.021$), between low and high ($p = 0.000$) and between medium and high ($p = 0.043$) groups. By comparison, the high religiosity group had higher scores than the low group while the medium group was intermediate between the two ($M_s = 4.13$ for high, 3.88 for medium and 3.6 for low).

A one-way ANOVA also was conducted to examine whether the three interpersonal religiosity groups have distinctively different evaluation of store attributes. Prior to interpreting the results, the assumption of homogeneity of variance for the dependent variables was tested. For the four dependent variables, none were found significant, suggesting that that the assumption was not violated.

Table 7.36 presents a summary of the one-way ANOVA results on group differences in evaluation of retail store attributes. As can be seen, statistically significant differences existed in the level of importance attached to all four store attribute factors under examination: merchandise ($F(2, 223) = 17.823, p < 0.01$), reputation ($F(2, 223) = 5.583, p < 0.01$), attractiveness ($F(2, 223) = 8.808, p < 0.01$) and price ($F(2, 223) = 10.71, p < 0.01$). The means and standard deviations are presented in Table 7.37.

Table 7.36 ANOVA of store attributes by interpersonal religiosity

	F	Sig.
Merchandise	17.823	0.000***
Reputation	5.583	0.004***
Attractiveness	8.808	0.000***
Price	10.710	0.000***

*** $p < 0.01$

Table 7.37 Descriptive statistics for store attributes by interpersonal religiosity

	Low	Medium	High
Merchandise	3.09 (0.85)	2.99 (0.69)	3.69 (0.79)
Reputation	4.11 (0.52)	4.20 (0.46)	4.35 (0.45)
Attractiveness	3.20 (0.80)	3.36 (0.77)	2.83 (0.80)
Price	3.61 (0.68)	4.09 (0.55)	4.02 (0.63)

Since significant results were produced by the ANOVA tests, pairwise multiple comparisons were conducted to compare means on each of the store attribute

factor for the three religiosity groups. The Bonferroni method for multiple comparison was used to perform the post-hoc analysis since Levene's F test permitted to confirm that the error variance of the dependent variable was equal (i.e. homogenous) across the three groups of religiosity.

For merchandise, significant differences were found between low and high ($p = 0.000$) and between medium and high ($p = 0.000$) groups. The high religiosity group had higher scores than the other two groups ($M_s = 3.69$ for high, 2.99 for medium and 3.09 for low). No significant difference between low and medium groups was observed.

For reputation, a significant difference was found between low and high groups ($p = 0.003$). By comparison, consumers with a high degree of interpersonal religiosity placed relatively more importance on store reputation than did those with low interpersonal religiosity ($M_s = 4.35$ for high and 4.11 for low). Medium group was intermediate in this regard ($M = 4.2$) and not significantly different from either low or high groups.

With respect to attractiveness, significant differences were found between low and high ($p = 0.007$) and between medium and high ($p = 0.000$) groups. The high religiosity group had lower scores than the other two groups ($M_s = 2.83$ for high, 3.36 for medium and 3.2 for low). No significant difference was indicated between low and medium groups.

As for price, significant differences were found between low and medium ($p = 0.000$) and between low and high ($p = 0.000$) groups. Both medium and high religiosity groups had higher scores than the low group ($M_s = 4.02$ for high, 4.09 for

medium and 3.61 for low). No significant difference was observed between medium and high groups.

7.4.5 Hypothesis 2e

To test Hypothesis 2e, a two-way multivariate analysis of variance (MANOVA) was performed on five dependent variables: hypermarket, department store, specialty department, specialty store and catalogue. Categorical independent variables were intrapersonal religiosity (low, medium and high) and interpersonal religiosity (low, medium and high). To check whether the homogeneity of variance-covariance assumption is met, Box's M test was used. The test produced non-significant result at $p < 0.1$ (Box's M = 152.245, F = 1.125, $p = 0.167$), suggesting that the covariance matrices are roughly equal and the assumption is tenable.

Table 7.38 MANOVA of store patronage by religiosity

	Value	F	Hypothesis df	Error df	Sig.
Intrapersonal religiosity					
Pillai's trace	0.036	0.775	10.000	428.000	0.653
Wilks' lambda	0.965	0.772	10.000	426.000	0.656
Interpersonal religiosity					
Pillai's trace	0.036	0.794	10.000	428.000	0.635
Wilks' lambda	0.964	0.791	10.000	426.000	0.638
Intrapersonal*Interpersonal					
Pillai's trace	0.128	1.423	20.000	864.000	0.102
Wilks' lambda	0.878	1.415	20.000	707.391	0.107

The MANOVA results are summarised in Table 7.38. The Pillai's trace and Wilks' lambda revealed that the combined dependent variables were not significantly affected by either intrapersonal religiosity (Pillai's trace = 0.036, $F(10, 428) = 0.775$, $p > 0.1$; Wilks' lambda = 0.965, $F(10, 426) = 0.772$, $p > 0.1$) or interpersonal religiosity (Pillai's trace = 0.036, $F(10, 428) = 0.794$, $p > 0.1$; Wilks' lambda = 0.964, $F(10, 426) = 0.791$, $p > 0.1$). Further, the interaction effect between these two independent variables were not found to be significant (Pillai's trace = 0.128, $F(20, 864) = 1.423$, $p > 0.1$; Wilks' lambda = 0.878, $F(20, 707.391) = 1.415$, $p > 0.1$). Thus, Hypothesis 2e was rejected. There were no significant differences in store patronage among consumers with different levels of religiosity.

Because the overall multivariate F test for store patronage produced non-significant results, no further testing was conducted. The means and standard deviations for each group in relation to their frequency of store patronage are reported in Tables 7.39 and 7.40.

Table 7.39 Descriptive statistics for store patronage by intrapersonal religiosity

	Low	Medium	High
Hypermarket	2.58 (1.14)	2.83 (1.17)	2.88 (1.06)
Department	3.43 (0.97)	3.46 (0.74)	3.30 (1.12)
Specialty department	2.31 (1.12)	2.54 (1.05)	2.53 (1.04)
Specialty	2.46 (0.97)	2.45 (1.04)	2.51 (1.03)
Catalogue	1.87 (0.90)	2.16 (0.99)	2.05 (1.21)

Table 7.40 Descriptive statistics for store patronage by interpersonal religiosity

	Low	Medium	High
Hypermarket	2.53 (1.18)	2.75 (1.03)	3.00 (1.09)
Department	3.46 (1.06)	3.46 (0.70)	3.30 (1.00)
Specialty department	2.37 (1.10)	2.50 (1.02)	2.54 (1.07)
Specialty	2.44 (1.02)	2.60 (1.00)	2.43 (1.02)
Catalogue	1.90 (1.00)	2.25 (1.05)	2.02 (1.10)

7.5 Summary of Results

This chapter outlined the first part of data analysis and findings. Two research hypotheses were tested. Hypothesis 1 was tested to examine the effect of religious affiliation on lifestyle, use of information source, shopping orientation, store attribute importance and store patronage. Table 7.41 summarises the findings related to Hypothesis 1. Based on the results obtained from the analysis, Hypotheses 1a, 1d and 1e were accepted while Hypotheses 1b and 1c were rejected.

Hypothesis 2 was tested to examine the effect of religiosity on lifestyle, use of information source, shopping orientation, store attribute importance and store patronage. In testing the hypothesis, the religiosity construct was viewed from two perspectives: intrapersonal religiosity and interpersonal religiosity. A summary of the findings related to Hypothesis 2 is presented in Table 7.42. Based on the results, Hypotheses 2a, 2b, 2c and 2d were accepted and Hypothesis 2e was rejected.

In conclusion, the outcomes of hypotheses testing indicated that lifestyle, use of information sources, shopping orientation and the importance judgments of store attributes were influenced by the degree of religiosity. The data analysis revealed that

religious affiliation, as compared to religiosity, played a relatively minor role in explaining these aspects of patronage behaviour.

In the ensuing chapter, the researcher presents the second part of data analysis with the application of multiple linear regression analysis.

Table 7.41 Summary of the findings: testing of Hypothesis 1

Hypothesis and variable	Religious affiliation
Hypothesis 1a: lifestyle	
Ethnic conscious	M, H > C
Innovativeness	NS
Traditional family	M > C
Fashion conservative	M > B, C
Hypothesis 1b: information source	
Media	n.s.
Personal	n.s.
Hypothesis 1c: shopping orientation	
Brand conscious	n.s.
Shopping enjoyment	n.s.
Fashion conscious	n.s.
Quality conscious	n.s.
Price conscious	n.s.
Impulsive shopping	n.s.
Hypothesis 1d: store attributes	
Merchandise	n.s.
Reputation	M > B
Attractiveness	n.s.
Price	M > B
Hypothesis 1e: store patronage	
Hypermarket	n.s.
Department store	n.s.
Specialty department	M > B
Specialty store	n.s.
Catalogue	n.s.

n.s. : not significant (i.e. no significant difference between groups)

M: Muslim; B: Buddhist; H: Hindu; C: Christian

Table 7.42 Summary of the findings: testing of Hypothesis 2

Hypothesis and variable	Intrapersonal religiosity	Interpersonal religiosity
Hypothesis 2a: lifestyle		
Ethnic conscious	H > L	H > L
Innovativeness	n.s.	n.s.
Traditional family	H > M > L	H > L, M
Fashion conservative	H > M > L	H > L, M
Hypothesis 2b: information source		
Media	H > L	n.s.
Personal	n.s.	H > L, M
Hypothesis 2c: shopping orientation		
Brand conscious	n.s.	M > L
Shopping enjoyment	n.s.	n.s.
Fashion conscious	n.s.	M > L
Quality conscious	H > L, M	H, M > L
Price conscious	H > L, M	H > L, M
Impulsive shopping	L > M, H	L > M, H
Hypothesis 2d: store attributes		
Merchandise	H > M > L	H > L, M
Reputation	H, M > L	H > L
Attractiveness	H > L, M	L, M > H
Price	H > M > L	H, M > L
Hypothesis 2e: store patronage		
Hypermarket	n.s.	n.s.
Department store	n.s.	n.s.
Specialty department	n.s.	n.s.
Specialty store	n.s.	n.s.
Catalogue	n.s.	n.s.

L: Low; M: Medium; H: High

n.s. : not significant (i.e. no significant difference between groups)

CHAPTER 8

DATA ANALYSIS AND RESULTS II

8.0 Introduction

The first part of data analysis has been presented in the preceding chapter where all the results were obtained through analyses of variance. In order to see if the relationships that were uncovered would hold in a multivariate context and to determine whether the relationships are linear, it is necessary to further analyse the data by means of multiple linear regression.

Multiple linear regression is defined as a multivariate statistical technique that supports the analysis of the relationship between a single dependent variable and several independent variables. The objective of such technique is to look at the independent's variable value to predict the dependent variable's one. The product should be what is known a "variate", that is, the independent's variable linear combination that may predict best the dependent variable. The variables' weights convey their input to the overall prediction (Hair et al. 1998). The specific issues addressed by the regression analysis in this study are listed below:

1. Were religious variables more or less important than lifestyles and demographics in predicting aspects of patronage behaviour?
2. How large the contribution of religious variables in predicting the aspects of patronage behaviour?
3. If meaningful relationships between variables were found, what is the direction of these relationships?

4. How strong the strength of association between a religious variable and a dependent variable of interest?

To answer the first question, the three sets of personal characteristic variables (religious variables, lifestyles and demographics) were included in the regression model to predict patronage behaviour. Of special interest was the influence of religious variables where expectation was that religious affiliation and religiosity would be shown to be the important regressors in the presence of extraneous variables such as lifestyles and demographic factors. To answer the second question, the increase in the coefficient of determination (R^2) when a religious variable entered into a regression equation was calculated. According to Norusis (1990), a change in R^2 indicates that a variable provides unique information about the criterion variable that is not available from other predictor variables in the equation

The third and final questions were answered by evaluating the standardised regression coefficients (beta weights) of religious variables in the final regression equation. The sign of the standardised regression coefficients was assessed to determine the direction of the relationships, whether it is positive or negative. To determine which variable is the most impactful, the beta weights of variables in the final regression equation were compared. The beta weight reflects the relative impact on a dependent variable of a change in one standard deviation in either variable (Hair et al. 1998). Following a common convention, a beta weight of about 0.1 was used as a cut-off threshold for a particular relationship to be considered of practical importance (Tate 1998).

8.2 Hypotheses

The following hypotheses were tested in this chapter:

H3a: Holding all other predictors constant, there is a significant relationship between religious affiliation and use of information sources.

H3b: Holding all other predictors constant, there is a significant relationship between religious affiliation and shopping orientation.

H3c: Holding all other predictors constant, there is a significant relationship between religious affiliation and perceived importance of store attributes.

H3d: Holding all other predictors constant, there is a significant relationship between religious affiliation and store patronage.

H4a: Holding all other predictors constant, there is a significant relationship between consumer religiosity and use of information source.

H4b: Holding all other predictors constant, there is a significant relationship between consumer religiosity and shopping orientation.

H4c: Holding all other predictors constant, there is a significant relationship between consumer religiosity and perceived importance of store attributes.

H4d: Holding all other predictors constant, there is a significant relationship between consumer religiosity and store patronage.

8.3 Analytical Model

The relationship between the independent (predictor) and the dependent (criterion) variables examined here is posited to be a linear function. The hypothetical linear regression model for this study has been developed as follows:

$$Y = b_0 + b_1X_1 + b_2X_2 + b_3X_3 + \dots + b_{14}X_{14} + e$$

where: Y is the predicted value on the dependent variable
 b_0 is the Y intercept (the value of Y when all the X values are 0)
 $X_1, X_2, X_3 \dots X_{14}$ represent the various independent variables
 $b_1, b_2 \dots b_{14}$ are the coefficients assigned to each of the
independent variables during regression
 e is the error term

The predictor variables were the three sets of personal characteristics namely religious variables (religious affiliation, intrapersonal religiosity and interpersonal religiosity), lifestyles (ethnic conscious, innovativeness, traditional family and fashion conservative) and demographics (gender, age, marital status, ethnicity, work status, education and income).

For all regression analyses, an automated selection procedure of stepwise regression was applied to find the best model. In the stepwise solution, the tests are performed at each step to determine the influence or contribution of each variable already in the equation as if it were entered last. So by doing this it makes it possible to select a set of independent variables that best predict the dependent variable, and thereby eliminate superfluous variables. The order of the inclusion of the independent variable is determined by the contribution of each variable, to explain the variance in the independent variable (Hair et al. 1998). In this case, the variable that explains the greatest amount of variance is entered first; the variable that explains the greatest amount of variance in conjunction with the first variable is entered second, and so on. The independent variables which do not meet the pre-established statistical criteria for inclusion in the equation are deleted at each successive step.

8.3 Prediction of Information Sources

To analyse the influence of personal characteristics on the subjects' use of information sources, media and personal sources were entered as criterion variables in two separate stepwise regression analyses. After each regression analysis, the assumptions about normality of residuals, linearity, equality of variance of the residuals (homoscedasticity) and independence were checked and the presence of outliers and multicollinearity was investigated.

For each regression analysis, the normality of the residuals was checked by constructing a normal probability plot of studentised residuals. The results confirmed the assumption that residuals were normally distributed. Next, a plot of studentised residuals versus the predicted values (residual scatterplot) was depicted to check whether the equality of variance assumption (homoscedasticity) had been violated. No increase or decrease in the spread of residuals with the magnitude of the predicted values was observed. Thus, it was concluded that the assumptions of linearity and homoscedasticity in multiple regression had not been violated.

Multicollinearity tests were performed using tolerance values, variance inflation factor (VIF) and condition index (Appendix G). The tolerance values and VIF indicate inconsequential collinearity. The results of the tests also showed that all independent variables in the regression equation had high tolerance values ranging from 0.705 to 0.993 and no VIF value exceeds 10, showing an absence of multicollinearity problem (Mason and Perreault 1991). Further, although the condition indices exceeded 15, which would be associated with multicollinearity problem (Belsley 1991), an examination of the proportion of variance decomposition values

indicated that none of them were substantial. Therefore, there were no reasons to be concerned about the presence of multicollinearity problem in the regression model.

8.3.1 Media

Table 8.1 presents the regression results. The analysis showed that the final regression model with media as a dependent variable was found to be statistically significant ($F = 20.126$, $p < 0.001$). The best model which emerged contains only four variables: innovativeness, intrapersonal religiosity, fashion conservative and traditional family. The effects of the remaining variables were not significant. The explanatory power of this model, as reported by the adjusted R^2 value was 0.254. This suggests that 25.4 percent of the variability in the subjects' uses of information from media sources was predicted by the four independent variables in the regression model.

Innovativeness was the first variable that entered the equation as it was the most salient in explaining subjects' use of media information. It alone contributes 17.7 percent of the variation. At step 2, intrapersonal religiosity entered the regression equation and accounted for an additional 3.3 percent of the variation in media source. Fashion conservative entered the regression equation at step 3 and accounted for an additional 3 percent of the variation in media sources. Traditional family was the final predictor that entered the equation and accounted for an additional 1.4 percent of the variation.

Table 8.1 Regression analysis: predictors of media source

Final stepwise regression					
Step	Variable entered	t to enter	R ²	Adj. R ²	F-ratio
1	Innovativeness	7.022***	0.180	0.177	49.303***
2	Intrapersonal religiosity	3.249***	0.217	0.210	30.980***
3	Fashion conservative	-3.106***	0.250	0.240	24.670***
4	Traditional family	2.263*	0.267	0.254	20.126***
Final regression equation					
Variable	B	S. E.	Beta	t-value	
(Constant)	0.013	0.375	-	0.034	
Innovativeness	0.419	0.066	0.375	6.368***	
Intrapersonal religiosity	0.259	0.078	0.211	3.302***	
Fashion conservative	-0.188	0.051	-0.236	-3.680***	
Traditional family	0.164	0.073	0.150	2.263*	

Note: none of the previously entered variables was removed in subsequent steps
t-value of the estimate: /t-value/ > 1.64, p > 0.1; /t-value/ > 1.96, p > 0.05
Significance level: * p < 0.05; ** p < 0.01; *** p < 0.001

As shown in the final regression equation in Table 8.1, media was significantly related to innovativeness ($\beta = 0.375$, $t = 6.368$, $p < 0.001$), intrapersonal religiosity ($\beta = 0.211$, $t = 3.302$, $p < 0.001$), fashion conservative ($\beta = -0.236$, $t = -3.68$, $p < 0.001$) and traditional family ($\beta = 0.15$, $t = 2.263$, $p < 0.05$). The direction of relationship between variables in the equation can be interpreted as follows. The positive sign of beta coefficient on innovativeness implied that respondents who are more innovative tend to use more information from media sources than those who are less innovative. The positive sign of beta coefficient on intrapersonal religiosity suggested that respondents who reported high in this aspect of religiosity tend to use information from media sources more than those who are less religious. Fashion conservative was

negatively related to media, suggesting that individuals who are more conservative in fashion style are less likely to use media source than those who are scored high on this lifestyle scale. Additionally, there was a positive relationship between traditional family and use of media information, implying that respondents who place higher importance on traditional family values tend to use more information from media sources.

The relative importance of variables was indicated by their standardised beta coefficients. The variable having the strongest effect on media information usage was innovativeness (0.375). The next most important was fashion conservative (0.236), followed by intrapersonal religiosity (0.211) and traditional family (0.15).

8.3.2 Personal

Statistics on the variables that entered the regression equation and that, collectively, explained portions of the variance in the dependent variable, personal source, are presented in Table 8.2. The overall F-test for the final regression model was highly significant ($F = 11.124$, $p < 0.001$) with an adjusted R^2 value of 0.119, indicating that 11.9 percent of the variation in the personal sources were accounted for by its linear relationship with the predictor variables.

The stepwise ordering of the three predictor variables that entered the regression equation is as follows. Interpersonal religiosity emerged as the best predictor as it was highly significant in explaining the use of personal source (6 percent). Intrapersonal religiosity entered the regression equation at step 2 and accounted for an additional 4 percent of the variation in personal sources. At step 3,

innovativeness entered the equation and accounted for an additional 1.9 percent of the variation in personal source.

Table 8.2 Regression analysis: predictors of personal source

Final stepwise regression					
Step	Variable entered	t to enter	R ²	Adj. R ²	F-ratio
1	Interpersonal religiosity	3.921***	0.064	0.060	15.375***
2	Intrapersonal religiosity	-3.288***	0.108	0.100	13.431***
3	Innovativeness	2.433*	0.131	0.119	11.124***
Final regression equation					
Variable	B	S. E.	Beta	t-value	
(Constant)	1.493	0.348	–	4.294***	
Interpersonal religiosity	0.422	0.084	0.373	5.009***	
Intrapersonal religiosity	-0.266	0.081	-0.245	-3.298***	
Innovativeness	0.151	0.062	0.153	2.433*	

Note: none of the previously entered variables was removed in subsequent steps
t-value of the estimate: /t-value/ > 1.64, p > 0.1; /t-value/ > 1.96, p > 0.05
Significance level: * p < 0.05; ** p < 0.01; *** p < 0.001

As shown in the final regression equation in Table 8.2, personal source was significantly related to interpersonal religiosity ($\beta = 0.373$, $t = 5.009$, $p < 0.001$), intrapersonal religiosity ($\beta = -0.245$, $t = -3.298$, $p < 0.001$) and innovativeness ($\beta = 0.153$, $t = 2.433$, $p < 0.05$). The direction of relationship between variables in the equation can be interpreted as follows. The beta coefficient of interpersonal religiosity variable indicated a positive relationship, implying that the higher the subjects' level of interpersonal religiosity, the more frequent they utilise information from personal sources. Innovativeness was also found to be positively related to personal source.

This positive relationship indicates that respondents who are more innovative tend to sought information from personal sources more frequently than those who less innovative. Also, there was a significant, negative beta coefficient on intrapersonal religiosity. This negative sign indicated an inverse relationship; as the subjects' level of intrapersonal religiosity increased their use of information from personal sources decreased.

The relative importance of variables was indicated by their standardised beta coefficients. The beta coefficient of interpersonal religiosity was the highest (0.373), suggesting that this variable was the most important in explaining the use of information from personal source. The next most important was intrapersonal religiosity (0.245), followed by innovativeness (0.153).

8.4 Prediction of Shopping Orientation

The influence of personal characteristics on shopping orientations was investigated by calculating separate stepwise multiple regressions with personal characteristics entered as predictor variables and each of the six shopping orientation factors created in the factor analysis as the criterion. After each regression analysis, the assumptions about normality of residuals, linearity, equality of variance of the residuals (homoscedasticity) and independence were examined and the presence of outliers and multicollinearity was investigated.

To confirm that the model did not violate the assumptions that underlie multiple regression analysis, several tests were conducted. First, for each regression analysis, the normal probability plot of the standardised residuals and the scatter plot were constructed to examine whether the assumptions of regression analysis were

met. The test verified that the residuals were normally distributed. Additionally, a visual inspection of the residual scatterplot (a plot of the studentised residuals versus the predicted values) confirmed that the residuals were linear and homoscedastic. Based on these tests, it can be judged that the assumptions underlying regression analysis had not been violated.

Next, to ensure multicollinearity among predictor variables would not be a problem, the tolerance value, variance inflation factor (VIF) and condition index of each variable were examined (see Appendix G). All independent variables in the regression equation had high tolerance values ranging from 0.705 to 0.993. The results also demonstrate that the maximum values of the VIF were well below the threshold value of 10, which is used to indicate the presence of multicollinearity (Mason and Perreault 1991). Although the condition indices exceeded 15 (the highest index was 23.972), which would be associated with multicollinearity problem (Belsley 1991), an examination of the proportion of variance decomposition values indicated that none of them were substantial. Thus there was no support for the existence of multicollinearity in the regression results.

8.4.1 Brand Conscious

A summary of stepwise regression results is provided in Table 8.3. The variables were entered into the regression equation one at a time. The overall F-test for the final regression model was highly significant ($F = 22.334$, $p < 0.001$) with three variables entered the resulting equation. The explanatory power as reported by the adjusted R^2 value was 0.222, suggesting that the three predictor variables were able to explain 22.2 percent of the variation in the brand conscious orientation.

Looking at the stepwise ordering of the predictor variables that entered the regression equation, innovativeness was the first variable that entered the equation as it was the most salient in explaining brand conscious orientation (18.6 percent). This was followed by interpersonal religiosity at step 2 which accounted for an additional 2.5 percent of the variation in brand conscious orientation. Fashion conservative was the final predictor that entered the equation and accounted for an additional 1.1 percent of the variation.

Table 8.3 Regression analysis: predictors of brand conscious

Final stepwise regression					
Step	Variable entered	t to enter	R ²	Adj. R ²	F-ratio
1	Innovativeness	7.225***	0.190	0.186	52.196***
2	Ethnic conscious	2.853**	0.218	0.211	31.005***
3	Fashion conservative	-2.030*	0.233	0.222	22.334***
Final regression equation					
Variable	B	S.E.	Beta	t-value	
(Constant)	0.956	0.362	–	2.637**	
Innovativeness	0.468	0.071	0.395	6.581***	
Ethnic conscious	0.254	0.079	0.195	3.211**	
Fashion conservative	-0.103	0.051	-0.122	-2.030*	

Note: none of the previously entered variables was removed in subsequent steps
t-value of the estimate: /t-value/ > 1.64, p > 0.1; /t-value/ > 1.96, p > 0.05
Significance level: * p < 0.05; ** p < 0.01; *** p < 0.001

The regression equation in Table 8.3 suggests that brand conscious was significantly related to innovativeness ($\beta = 0.395$, $t = 6.581$, $p < 0.001$), ethnic conscious ($\beta = 0.195$, $t = 3.211$, $p < 0.01$) and fashion conservative ($\beta = -0.122$, $t = -$

2.03, $p < 0.05$). A significant positive relationship between innovativeness and brand conscious implied that respondents who are more innovative tend to exhibit greater shopping enjoyment than those who are less innovative. Ethnic conscious was also found to be positively related to brand conscious. This positive relationship suggests that respondents who are more ethnic conscious tend to be more brand conscious. Fashion conservative, on the other hand, was found to be negatively related to brand conscious, suggesting that respondents who rank higher on the fashion conservative scale tend to be less brand conscious.

The relative importance of variables was indicated by their standardised beta coefficients. The beta coefficient of innovativeness was the highest (0.395), suggesting that this variable was more important in explaining brand conscious than was ethnic conscious (0.195) and fashion conservative (0.122).

8.4.2 Shopping Enjoyment

Table 8.4 presents a summary of the results of multiple regression analysis with shopping enjoyment as a dependent variable. The overall F-test for the final regression model indicated a strong significant relationship that existed between the independent variables and the dependent variable ($F = 13.729$, $p < 0.001$). With six predictor variables entered the resulting equation, the explanatory power of the model, as reported by the adjusted R^2 value was 0.253, suggesting that the six predictor variables were able to explain 25.3 percent of the variation in the shopping enjoyment orientation.

Table 8.4 Regression analysis: predictors of shopping enjoyment

Final stepwise regression					
Step	Variable entered	t to enter	R ²	Adj. R ²	F-ratio
1	Innovativeness	6.405***	0.155	0.151	41.029***
2	Ethnic conscious	3.158**	0.191	0.184	26.321***
3	Gender	2.626**	0.215	0.205	20.310***
4	Traditional family	2.306*	0.234	0.220	16.858***
5	Fashion conservative	-2.659**	0.258	0.241	15.271***
6	Ethnic2	-2.174*	0.273	0.253	13.729***

Final regression equation				
Variable	B	S. E.	Beta	t-value
(Constant)	0.907	0.368	–	2.465**
Innovativeness	0.375	0.068	0.330	5.514***
Ethnic conscious	0.203	0.076	0.163	2.666**
Gender	0.211	0.097	0.128	2.179*
Traditional family	0.220	0.072	0.197	3.047**
Fashion conservative	-0.138	0.052	-0.170	-2.668**
Ethnic2	-0.251	0.115	-0.126	-2.174*

Note: none of the previously entered variables was removed in subsequent steps
t-value of the estimate: /t-value/ > 1.64, p > 0.1; /t-value/ > 1.96, p > 0.05
Significance level: * p < 0.05; ** p < 0.01; *** p < 0.001

The stepwise ordering of the predictor variables that entered the equation is as follows. As the most salient in explaining shopping enjoyment (15.1 percent), Innovativeness was the first personal characteristic variable that entered the equation. At step 2, ethnic conscious entered the regression equation and accounted for an additional 3.3 percent of the variation in shopping enjoyment. At step 3, gender entered the equation and accounted for an additional 2.1 percent of the variation. At step 4, traditional family entered the equation and accounted for an additional 1.5 percent of the variation in shopping enjoyment. Fashion conservative entered the

regression equation at step 5 and accounted for an additional 2.1 percent of the variation in shopping enjoyment. Ethnicity (Ethnic2) was the final predictor that entered the equation and accounted for an additional 1.2 percent of the variation.

As shown in the final regression equation in Table 8.4, shopping enjoyment was significantly related to innovativeness ($\beta = 0.33$, $t = 5.514$, $p < 0.001$), ethnic conscious ($\beta = 0.163$, $t = 2.666$, $p < 0.01$), gender ($\beta = 0.128$, $t = 2.179$, $p < 0.05$), traditional family ($\beta = 0.197$, $t = 3.047$, $p < 0.01$), fashion conservative ($\beta = -0.17$, $t = -2.668$, $p < 0.01$) and ethnic2 ($\beta = 0.126$, $t = -2.174$, $p < 0.05$). The positive sign of beta coefficient on innovativeness implied that respondents who are more innovative tend to exhibit greater shopping enjoyment than those who are less innovative. Ethnic conscious was also positively related to shopping enjoyment, implying that respondents who are more ethnic conscious tend to exhibit greater shopping enjoyment. Gender also seemed to have an important impact on shopping enjoyment. A positive beta coefficient on gender suggests that female respondents tend to display greater shopping enjoyment orientation than their male counterparts. Traditional family was positively related to shopping enjoyment, suggesting that respondents who scored high on the traditional family scale are more likely to enjoy shopping. On the other hand, a negative association between fashion conservative and shopping enjoyment implied that individuals with more conservative attitude towards fashion styles are less likely to enjoy shopping. Additionally, ethnic2 was found to be negatively correlated with shopping enjoyment. The negative sign of beta coefficient on ethnic2 indicated that Indian respondents, as compared to Malay, are less likely to enjoy shopping activities.

The relative importance of variables was indicated by their standardised beta coefficients. The variable having the strongest effect on shopping enjoyment was innovativeness (0.33). The next most important was traditional family (0.197), fashion conservative (0.17) and ethnic conscious (0.163). The relative importance of gender (0.128) and ethnic2 (0.126) are comparatively lower.

8.4.3 Fashion Conscious

Statistics on the variables that entered the regression equation and that, collectively, explained portions of the variance in the dependent variable, fashion conscious, are summarised in Table 8.5. The analysis showed that the explanatory power of the model as reported by the adjusted R^2 value was 0.435, suggesting that independent variables were able to explain 43.5 percent of the variability in the fashion conscious orientation. The overall F-test for the final regression model was highly significant ($F = 29.763$, $p < 0.001$) with six personal characteristic variables entered the resulting equation, namely innovativeness, education, age, marital status, fashion conservative and ethnic2.

Innovativeness was the first variable that entered the equation as it was the most salient in explaining fashion conscious orientation (30.3 percent). At step 2, education entered the regression equation and accounted for an additional 7.7 percent of the variation in fashion conscious. At step 3, age entered the equation and accounted for an additional 2.8 percent of the variation in fashion conscious. Marital status, the next variable to enter the regression equation at step 4, accounted for an additional 1 percent of the variation. Fashion conservative entered the equation at step 5 and accounted for an additional 0.9 percent of the variation. The final predictor

variable that entered the equation was ethnic2, accounted for an additional 0.8 percent of variation in fashion conscious orientation.

Table 8.5 Regression analysis: predictors of fashion conscious

Final stepwise regression					
Step	Variable entered	t to enter	R ²	Adj. R ²	F-ratio
1	Innovativeness	9.925***	0.306	0.303	98.514***
2	Education	5.336***	0.385	0.380	69.562***
3	Age	-3.385***	0.416	0.408	52.379***
4	Marital status	2.195**	0.428	0.418	41.168***
5	Fashion conservative	2.157*	0.440	0.427	34.411***
6	Ethnic2	2.023*	0.450	0.435	29.763***
Final regression equation					
Variable	B	S. E.	Beta	t-value	
(Constant)	2.059	0.269	-	7.652***	
Innovativeness	0.579	0.059	0.514	9.880***	
Education	0.236	0.042	0.281	5.569***	
Age	-0.104	0.026	-0.229	-3.939***	
Marital status	0.231	0.096	0.137	2.046**	
Fashion conservative	-0.089	0.042	-0.110	-2.139*	
Ethnic2	0.201	0.100	0.102	2.023*	

Note: none of the previously entered variables was removed in subsequent steps
t-value of the estimate: /t-value/ > 1.64, p > 0.1; /t-value/ > 1.96, p > 0.05
Significance level: * p < 0.05; ** p < 0.01; *** p < 0.001

As shown in the final regression equation in Table 8.5, fashion conscious was significantly related to the following factors: innovativeness ($\beta = 0.514$, $t = 9.88$, $p < 0.001$), education ($\beta = 0.281$, $t = 5.569$, $p < 0.001$), age ($\beta = -0.229$, $t = -3.939$, $p < 0.001$), marital status ($\beta = 0.137$, $t = 2.046$, $p < 0.01$), fashion conservative ($\beta = -0.11$, $t = -2.139$, $p < 0.05$) and ethnic2 ($\beta = 0.102$, $t = 2.023$, $p < 0.05$). The direction of

relationship between variables in the equation can be interpreted as follows. The positive sign of beta coefficient on innovativeness implied that respondents who are more innovative tend to exhibit greater fashion consciousness than those who are less innovative. Education was also positively related to fashion conscious, implying that respondents with higher education attainment tend to be more fashion conscious. A negative beta coefficient of age indicated an inverse relationship; as age increased, fashion consciousness decreased. There was a positive relationship between marital status and fashion conscious, suggesting that single respondents tend to be more fashion conscious than their married counterparts. As predicted, there was a negative relationship between fashion conservative and fashion conscious, implying that individuals who are more conservative in fashion style tend to be less fashion conscious than those who are less fashion conservative. Additionally, ethnic2 was found to correlate with fashion conscious. The negative sign of beta coefficient on ethnic2 suggested that Indian respondents, as compared to Malay, are less likely to display fashion conscious orientation.

The relative importance of variables was indicated by their standardised beta coefficients (β). As shown in Table 8.5, the variable having the strongest effect on fashion conscious was innovativeness (0.514). The next most important was education (0.281) and age (0.229), followed by marital status (0.137), fashion conservative (0.11) and ethnic2 (0.102).

8.4.4 Quality Conscious

Table 8.6 presents the results of regression analysis between the components of personal characteristics and quality conscious. The overall F-test for the final

regression model was found to be statistically significant ($F = 10.503$, $p < 0.001$). The adjusted R^2 value, compensating for the positive bias in the R^2 was 0.174, suggesting that predictor variables were able to explain 17.4 percent of the variation in the quality conscious orientation.

The best model for the multiple regression which emerged contains five predictor variables. Interpersonal religiosity was the first predictor variable that entered the equation as it was the most salient in explaining quality conscious orientation (8.4 percent). At step 2, innovativeness entered the regression equation and accounted for an additional 4.1 percent of the variation in quality conscious. Age entered the equation at step 3 and accounted for an additional 1.9 percent of the variation. At step 4, income entered the regression equation and accounted for an additional 1.5 percent of the variation in quality conscious. Finally, at step 5, intrapersonal religiosity entered the equation and accounted for an additional 1.5 percent of the variation in quality conscious.

As shown in the final regression equation in Table 8.6, quality conscious was significantly related to interpersonal religiosity ($\beta = 0.191$, $t = 2.629$, $p < 0.01$), innovativeness ($\beta = 0.183$, $t = 2.919$, $p < 0.01$), age ($\beta = -0.176$, $t = -2.766$, $p < 0.01$), income ($\beta = 0.145$, $t = 2.332$, $p < 0.05$) and intrapersonal religiosity ($\beta = 0.162$, $t = 2.254$, $p < 0.05$). The positive sign of beta coefficient on both religiosity variables implied that individuals who are more religious, as measured by their intrapersonal and interpersonal aspects, tend to be more quality conscious than those who are less religious. The positive beta coefficient on innovativeness indicated that individuals who are more innovative are more likely to be quality conscious than those who are less innovative. Age was negatively related to quality conscious; as age increase,

quality consciousness decrease. Income on the other hand was positively related to quality conscious, implying that higher income earners tend to be more quality conscious than lower income earners.

Table 8.6 Regression analysis: predictors of quality conscious

Final stepwise regression					
Step	Variable entered	t to enter	R ²	Adj. R ²	F-ratio
1	Interpersonal religiosity	4.649***	0.088	0.084	21.615***
2	Innovativeness	3.402***	0.133	0.125	17.104***
3	Age	-2.425**	0.155	0.144	13.613***
4	Income	2.236*	0.174	0.159	11.644***
5	Intrapersonal religiosity	2.254*	0.193	0.174	10.503***
Final regression equation					
Variable	B	S. E.	Beta	t-value	
(Constant)	1.804	0.359	-	5.020***	
Interpersonal religiosity	0.212	0.080	0.191	2.629**	
Innovativeness	0.177	0.061	0.183	2.919**	
Age	-0.068	0.025	-0.176	-2.766**	
Income	0.072	0.031	0.145	2.332*	
Intrapersonal religiosity	0.173	0.077	0.162	2.254*	

Note: none of the previously entered variables was removed in subsequent steps
t-value of the estimate: /t-value/ > 1.64, p > 0.1; /t-value/ > 1.96, p > 0.05
Significance level: * p < 0.05; ** p < 0.01; *** p < 0.001

The relative importance of variables in the model was indicated by their standardised beta coefficients. The variable having the strongest effect on quality conscious was interpersonal religiosity (0.191). The second most important was innovativeness (0.183), followed by age (0.176), intrapersonal religiosity (0.162) and income (0.145).

8.4.5 Impulsive Shopping

Table 8.7 summarises the results of multiple regression of variables with impulsive shopping as the dependent variable. The overall F-test for the final regression model was found to be statistically significant ($F = 7.409$, $p < 0.001$). The adjusted R^2 value was 0.079, suggesting that predictor variables were able to explain only 7.9 percent of the variation in the impulsive shopping.

Looking at the stepwise ordering of the predictor variables that entered the regression equation, intrapersonal religiosity was the first variable that entered the equation as it was the most salient in explaining impulsive shopping orientation. It alone explained 4.9 percent of the variation. At step 2, innovativeness entered the regression equation and accounted for an additional 1.5 percent of the variation in impulsive shopping. Interpersonal religiosity entered the regression equation at step 3 and accounted for an additional 1.5 percent of the variation.

The regression equation in Table 8.7 suggests that impulsive shopping was significantly related to intrapersonal religiosity ($\beta = -0.148$, $t = -1.951$, $p < 0.05$), innovativeness ($\beta = 0.149$, $t = 2.316$, $p < 0.05$) and interpersonal religiosity ($\beta = -0.162$, $t = -2.13$, $p < 0.05$). The direction of relationship between variables in the equation can be interpreted as follows. The negative sign of beta coefficient on both intrapersonal and interpersonal religiosity implied that individuals who are more religious, as measured by their intrapersonal and interpersonal commitment, tend to be less impulsive than their less religious counterparts. The positive sign of beta coefficient on innovativeness implied that individuals who are more innovative are more likely to exhibit greater price consciousness than those who are less innovative.

Table 8.7 Regression analysis: predictors of impulsive shopping

Final stepwise regression					
Step	Variable entered	t to enter	R ²	Adj. R ²	F-ratio
1	Intrapersonal religiosity	-3.550***	0.053	0.049	12.603***
2	Innovativeness	2.147*	0.072	0.064	8.708***
3	Interpersonal religiosity	-2.130*	0.091	0.079	7.409***
Final regression equation					
Variable	B	S. E.	Beta	t-value	
(Constant)	4.088	0.438	-	9.342***	
Intrapersonal religiosity	-0.198	0.102	-0.148	-1.951*	
Innovativeness	0.181	0.078	0.149	2.316*	
Interpersonal religiosity	-0.226	0.106	-0.162	-2.130*	

Note: none of the previously entered variables was removed in subsequent steps
t-value of the estimate: /t-value/ > 1.64, p > 0.1; /t-value/ > 1.96, p > 0.05
Significance level: * p < 0.05; ** p < 0.01; *** p < 0.001

The relative importance of variables in the model was indicated by their standardised beta coefficients. The variable having the strongest effect on impulsive shopping was interpersonal religiosity (0.162). The next most important was innovativeness (0.149) and intrapersonal religiosity (0.148).

8.4.6 Price Conscious

Statistics on the variables that entered the regression equation and that, collectively, explained portions of the variance in the dependent variable, price conscious, are summarised in Table 8.8. The overall model was found to be statistically significant (F = 9.743, p < 0.001). The explanatory power, as reported by the adjusted R² value

was 0.163, suggesting that predictor variables were able to explain 16.3 percent of the variation in the price conscious orientation.

Table 8.8 Regression analysis: predictors of price conscious

Final stepwise regression					
Step	Variable entered	t to enter	R ²	Adj. R ²	F-ratio
1	Interpersonal religiosity	4.908***	0.097	0.093	24.087***
2	Innovativeness	2.895**	0.130	0.122	16.630***
3	Intrapersonal religiosity	2.281*	0.150	0.138	13.031***
4	Income	-2.112*	0.167	0.151	11.041***
5	Gender	1.990*	0.181	0.163	9.743***
Final regression equation					
Variable	B	S. E.	Beta	t-value	
(Constant)	1.726	0.370	-	4.669***	
Interpersonal religiosity	0.249	0.086	0.213	2.907**	
Innovativeness	0.172	0.063	0.168	2.732**	
Intrapersonal religiosity	0.175	0.082	0.156	2.149*	
Income	-0.073	0.033	-0.139	-2.254*	
Gender	0.182	0.091	0.123	1.990*	

Note: none of the previously entered variables was removed in subsequent steps
t-value of the estimate: /t-value/ > 1.64, p > 0.1; /t-value/ > 1.96, p > 0.05
Significance level: * p < 0.05; ** p < 0.01; *** p < 0.001

The stepwise ordering of the personal characteristic variables that entered the equation is as follows. Interpersonal religiosity was the first variable that entered the equation as it was the most salient in explaining price conscious orientation (9.3 percent). At step 2, innovativeness entered the regression equation and accounted for an additional 2.9 percent of the variation in price conscious. At step 3, intrapersonal religiosity entered the equation and accounted for an additional 1.6 percent of the

variation in price conscious. At step 4, income entered the regression equation. Income alone explained for an additional 1.3 percent of the variation in price conscious. Finally, gender entered the regression equation at step 5 and accounted for an additional 1.2 percent of the variation in price conscious orientation.

As shown in the final regression equation in Table 8.8, price conscious was significantly related to interpersonal religiosity ($\beta = 0.213$, $t = 2.907$, $p < 0.01$), innovativeness ($\beta = 0.168$, $t = 2.732$, $p < 0.01$), intrapersonal religiosity ($\beta = 0.156$, $t = 2.149$, $p < 0.05$), income ($\beta = 0.139$, $t = -2.254$, $p < 0.05$) and gender ($\beta = 0.123$, $t = 1.99$, $p < 0.05$). The positive sign of beta coefficient on intrapersonal and interpersonal religiosity implied that individuals who are more religious, as measured by these two aspects of religious commitment, tend to be more price conscious than those who are less religious. Innovativeness was positively related to price conscious, implying that individuals who are more innovative are more likely to exhibit greater price consciousness than those who are less innovative. There was a negative relationship between income and price conscious, implying that as income increased, price consciousness decreased. A positive sign of beta coefficient on gender suggested that female respondents are more price conscious than their male counterparts.

The relative importance of variables in the model was indicated by their standardised beta coefficients. The absolute value of the beta coefficient for interpersonal religiosity is highest (0.213). The next most important was innovativeness (0.168), followed by intrapersonal religiosity (0.156) and two demographic variables of income (0.139) and gender (0.123).

8.5 Prediction of Store Attribute Importance

To investigate the influence of personal characteristics on the subjects' perceived importance of store attributes, a series of linear multiple regression analyses were performed. The criterion set of variables consisted of the four factor scores data for the store attributes. The predictor set of variables contained two factor scores data for the religiosity, four factors for the lifestyles and eight demographic variables. After each regression analysis, the assumptions about normality of residuals, linearity, homoscedasticity and independence were checked and the presence of outliers and multicollinearity was investigated.

To test whether the assumptions of linearity, homoscedasticity and independence were met by the data, checks were undertaken by constructing the normal probability plot and residuals scatterplot. A visual inspection of the normal probability plot revealed that the residual plots were almost close to the normal straight diagonal line, suggesting that the residuals were approximate normal distribution. Additionally, the scatter plot (a plot of the studentised residuals versus the predicted values) revealed that most of the plots concentrated along the zero line in an almost rectangular shape, with relatively equal dispersion about zero and no strong tendency to be either greater or less than zero, verifying that the residuals were linear and homoscedastic. Thus there were no reasons to be concerned about the violation of regression assumptions.

The model was also tested to detect for the presence of multicollinearity in the resulting equation using tolerance value, variance inflation factor (VIF) and condition index (see Appendix G). The tolerance values and VIF indicate inconsequential collinearity. The results of the analysis showed that all independent variables in the

regression equation had high tolerance values ranging from 0.642 to 0.993 and no VIF value exceeds 10, indicating an absence of multicollinearity problem (Mason and Perreault 1991). Although the condition indices exceeded 15 (the highest index was 23.566), which would be associated with high variance proportions (Belsley 1991), an examination of the proportion of variance decomposition values indicated that none of them were substantial. Thus, it is safe to assume that multicollinearity does not affect the coefficients' value in the regression results.

8.5.1 Merchandise

Table 8.9 reports the summarised results of multiple regression analysis of the importance on merchandise. The overall F-test for the final regression model was highly significant ($F = 9.145$, $p < 0.001$) with four variables entered the resulting equation. The adjusted R^2 value was 0.126, suggesting that predictor variables were able to explain 12.6 percent of the variation in the dependent variable.

Interpersonal religiosity entered the equation at step 1 and accounted for 6.7 percent of the variation in of the total variation in explaining the importance on merchandise. At step 2, innovativeness entered the regression equation and accounted for an additional 2.8 percent of the variation. At step 3, ethnic conscious entered the equation and accounted for an additional 1.9 percent of the variation. Finally, intrapersonal religiosity entered the equation at step 4 and accounted for an additional 1.2 percent of the total variation in explaining the importance of merchandise.

Table 8.9 Regression analysis: predictors of merchandise

Final stepwise regression					
Step	Variable entered	t to enter	R ²	Adj. R ²	F-ratio
1	Interpersonal religiosity	4.127***	0.071	0.067	17.031***
2	Innovativeness	2.852**	0.103	0.095	12.854***
3	Ethnic conscious	2.373*	0.126	0.114	10.624***
4	Intrapersonal religiosity	2.059*	0.142	0.126	9.145***
Final regression equation					
Variable	B	S. E.	Beta	t-value	
(Constant)	0.607	0.455	–	1.335	
Interpersonal religiosity	0.191	0.100	0.142	1.907*	
Innovativeness	0.192	0.074	0.163	2.582**	
Ethnic conscious	0.178	0.083	0.139	2.151*	
Intrapersonal religiosity	0.198	0.096	0.153	2.059*	

Note: none of the previously entered variables was removed in subsequent steps
t-value of the estimate: /t-value/ > 1.64, p > 0.1; /t-value/ > 1.96, p > 0.05
Significance level: * p < 0.05; ** p < 0.01; *** p < 0.001

The regression equation in Table 8.9 above suggests that merchandise was significantly related to interpersonal religiosity ($\beta = 0.142$, $t = 1.907$, $p < 0.05$), innovativeness ($\beta = 0.163$, $t = 2.582$, $p < 0.01$), ethnic conscious ($\beta = 0.139$, $t = 2.151$, $p < 0.05$) and intrapersonal religiosity ($\beta = 0.153$, $t = 2.059$, $p < 0.05$). The positive sign of beta coefficient on both intrapersonal and interpersonal religiosity implied that individuals who are more religious, as measured by their intrapersonal and interpersonal commitment, tend to attach greater importance on store merchandise than those who are less religious. Innovativeness and ethnic conscious were also positively related to the importance attached on merchandise, suggesting that

individuals who are more innovative and ethnic conscious are more likely to rated merchandise as an important retail store criteria.

The relative importance of variables was indicated by their standardised beta coefficients. The absolute value of the beta coefficient for innovativeness is highest (0.163). This shows that innovativeness is a stronger predictor of the importance on merchandise relative to other variables in the equation. The next most important was intrapersonal religiosity (0.153), followed by interpersonal religiosity (0.142) and ethnic conscious (0.139).

8.5.2 Reputation

Statistics on the variables that entered the regression equation and that, collectively, explained portions of the variance in the dependent variable are presented in Table 8.10. The overall F-test for the final regression model was highly significant ($F = 10.243$, $p < 0.001$), suggesting a strong significant relationship that existed between the independent variables and the dependent variable. The explanatory power, as reported by the adjusted R^2 value was 0.141, suggesting that predictor variables were able to explain 14.1 percent of the variability in the importance of reputation.

The stepwise ordering of the personal characteristic variables that entered the regression equation is as follows. Interpersonal religiosity was the first variable that entered the equation as it was the most salient in explaining store reputation. It alone explained 5.8 percent of the variation. At step 2, religious affiliation (religion1) entered the regression equation and accounted for an additional 2.9 percent of the variation in store reputation. At step 3, gender entered the equation and accounted for an additional 2.9 percent of the variation in store reputation. Finally, innovativeness

entered the regression equation at Step 4 and accounted for an additional 2.5 percent of the variation in store reputation.

Table 8.10 Regression analysis: predictors of reputation

Final stepwise regression					
Step	Variable entered	t to enter	R ²	Adj. R ²	F-ratio
1	Interpersonal religiosity	3.864***	0.063	0.058	14.933***
2	Religion1	2.821**	0.095	0.087	11.678***
3	Gender	2.884**	0.127	0.116	10.814***
4	Innovativeness	2.751**	0.156	0.141	10.243***
Final regression equation					
Variable	B	S. E.	Beta	t-value	
(Constant)	3.175	0.204	–	15.589***	
Interpersonal religiosity	0.151	0.049	0.195	3.103**	
Religion1	0.189	0.061	0.193	3.094**	
Gender	0.171	0.061	0.174	2.796**	
Innovativeness	0.116	0.042	0.171	2.751**	

Note: none of the previously entered variables was removed in subsequent steps
t-value of the estimate: /t-value/ > 1.64, p > 0.1; /t-value/ > 1.96, p > 0.05
Significance level: * p < 0.05; ** p < 0.01; *** p < 0.001

The regression equation in Table 8.10 above suggests that reputation was significantly related to interpersonal religiosity ($\beta = 0.195$, $t = 3.103$, $p < 0.01$), religion1 ($\beta = 0.193$, $t = 3.094$, $p < 0.01$), gender ($\beta = 0.174$, $t = 2.796$, $p < 0.01$) and innovativeness ($\beta = 0.171$, $t = 2.751$, $p < 0.01$). The direction of relationship between variables in the equation can be interpreted as follows. The positive sign of beta coefficient on intrapersonal religiosity implied that respondents who reported high in this aspect of religiosity tend to attach greater importance on store reputation than

those who are less religious. Religion1 (dummy variable of religious affiliation) was positively related to the importance on reputation. This positive relationship implies that Buddhists tend to attach greater importance on store reputation than Muslims. There was a positive sign of beta coefficient on gender, suggesting that female respondents are more price conscious than their male counterparts. Innovativeness was positively related to the importance attached on reputation, implying that individuals who are more innovative are more likely to rated greater importance on store reputation.

The relative importance of variables was indicated by their standardised beta coefficients. The absolute value of the beta coefficient for interpersonal religiosity is highest (0.195), indicating that this variable is a stronger predictor of the importance on store reputation relative to other variables in the equation. The next most important was religious affiliation (0.193), followed by gender (0.174) and innovativeness (0.171).

8.5.3 Attractiveness

Table 8.11 reports the summarised results of multiple regression analysis of variables with store attractiveness. The overall F-test for the final regression model was highly significant ($F = 8.667$, $p < 0.001$), suggesting a significant relationship that existed between the independent variables and the dependent variable. The proportion of shared variance as reported by adjusted R^2 value equalled 0.093. This means that only 9.3 percent of the variance in the store attractiveness was accounted for by the predictor variables included in the model.

The stepwise ordering of the predictor variables that entered the equation is as follows. Intrapersonal religiosity was the first variable that entered the equation as it was the most salient in explaining store attractiveness (6.1 percent). At step 2, interpersonal religiosity entered the regression equation and accounted for an additional 1.4 percent of the variation in store attractiveness. Innovativeness entered the regression equation at step 3 and accounted for an additional 1.8 percent of the variation in store attractiveness.

Table 8.11 Regression analysis: predictors of attractiveness

Final stepwise regression					
Step	Variable entered	t to enter	R ²	Adj. R ²	F-ratio
1	Intrapersonal religiosity	-3.942***	0.065	0.061	15.536***
2	Interpersonal religiosity	-2.134*	0.084	0.075	10.169***
3	Innovativeness	2.296*	0.105	0.093	8.667***
Final regression equation					
Variable	B	S. E.	Beta	t-value	
(Constant)	4.219	0.407	-	10.36***	
Intrapersonal religiosity	-0.207	0.095	-0.165	-2.188*	
Interpersonal religiosity	-0.229	0.099	-0.175	-2.319*	
Innovativeness	0.167	0.073	0.146	2.296*	

Note: none of the previously entered variables was removed in subsequent steps
t-value of the estimate: /t-value/ > 1.64, p > 0.1; /t-value/ > 1.96, p > 0.05
Significance level: * p < 0.05; ** p < 0.01; *** p < 0.001

As shown in the final regression equation in Table 8.11 above, attractiveness was significantly related to intrapersonal religiosity ($\beta = -0.165$, $t = -2.188$, $p < 0.05$), interpersonal religiosity ($\beta = -0.175$, $t = -2.319$, $p < 0.05$) and innovativeness ($\beta =$

0.146, $t = 2.296$, $p < 0.05$). The negative sign of beta coefficient on intrapersonal and interpersonal religiosity variables implied that individuals who are more religious, as measured by their intrapersonal and interpersonal commitment, tend to attach less importance on store attractiveness than those who are less religious. Innovative on the other hand was positively related to the importance attached on attractiveness, implying that individuals who are more innovative are more likely to attach greater importance on store attractiveness.

The relative importance of variables was indicated by their standardised beta coefficients. As the final regression equation shows, the absolute value of the beta coefficient for interpersonal religiosity is highest (0.175), suggesting that interpersonal religiosity is a stronger predictor of store attractiveness relative to intrapersonal religiosity (0.165) and innovativeness (0.146).

8.5.4 Price

Table 8.12 summarises the results of the multiple regression analysis with price as the dependent measure. As the table indicates, the final regression model with media sources as dependent variable was found to be statistically significant ($F = 14.353$, $p < 0.001$). The explanatory power of this model, as reported by the adjusted R^2 value was 0.263, indicating that 26.3 percent of the variability in the importance on price could be explained by the independent variables.

As shown in the final regression equation in Table 8.12, price was significantly related to intrapersonal religiosity ($\beta = 0.288$, $t = 4.026$, $p < 0.001$), age ($\beta = -0.162$, $t = -2.676$, $p < 0.001$), religion2 ($\beta = -0.178$, $t = -2.853$, $p < 0.01$), gender ($\beta = -0.143$, $t = -2.473$, $p < 0.01$), income ($\beta = -0.146$, $t = -2.467$, $p < 0.01$)

and interpersonal religiosity ($\beta = 0.137$, $t = 1.985$, $p < 0.05$). The direction of relationship between variables in the above regression equation can be interpreted as follows. Both intrapersonal and interpersonal religiosity were positively related to price, implying that individuals who are more religious, as measured by their intrapersonal and interpersonal commitment, tend to attach greater importance on price than those who are less religious. A negative beta coefficient of age indicated an inverse relationship; as age increased, perceived importance on price decreased. The negative relationship between religion2 and the importance on price implies that Hindus tend to attach greater importance on this store attribute than their Muslim counterparts. A negative sign of beta coefficient on gender suggested that male respondents tend to perceive price as an important determinant in selecting a retail store than their female counterparts. Further, there was a negative relationship between income and price, implying that as income increased, perceived importance on price attribute decreased.

The relative importance of variables was indicated by their standardised beta coefficients (β). As showed in Table 8.12, the absolute value of the beta coefficient for intrapersonal religiosity is much higher than those of the other variables (0.288), implying that intrapersonal religiosity is a stronger predictor of the importance on price relative to other variables in the equation. The next most important was age (0.162) and religion2 (0.178), followed by gender (0.143), income (0.146) and interpersonal religiosity (0.137).

Table 8.12 Regression analysis: predictors of price

Final stepwise regression					
Step	Variable entered	t to enter	R ²	Adj. R ²	F-ratio
1	Intrapersonal religiosity	6.511***	0.159	0.155	42.395***
2	Age	-3.608***	0.206	0.198	28.843***
3	Religion2	-2.680**	0.230	0.220	22.156***
4	Gender	-2.516**	0.252	0.238	18.598***
5	Income	-2.295**	0.269	0.253	16.219***
6	Interpersonal religiosity	1.985*	0.282	0.263	14.353***
Final regression equation					
Variable	B	S. E.	Beta	t-value	
(Constant)	2.812	0.285	-	9.854***	
Intrapersonal religiosity	0.289	0.072	0.288	4.026***	
Age	-0.059	0.022	-0.162	-2.676***	
Religion2	-0.270	0.094	-0.178	-2.853**	
Gender	-0.190	0.077	-0.143	-2.473**	
Income	-0.069	0.028	-0.146	-2.467**	
Interpersonal religiosity	0.144	0.072	0.137	1.985*	

Note: none of the previously entered variables was removed in subsequent steps
t-value of the estimate: /t-value/ > 1.64, p > 0.1; /t-value/ > 1.96, p > 0.05
Significance level: * p < 0.05; ** p < 0.01; *** p < 0.001

8.6 Prediction of Store Patronage

The predictor variables of personal characteristics were entered into a regression equation with specialty department store as the criterion variable. However, before the regression coefficients were examined, it was necessary to test, if all the assumptions to apply a regression analysis are fulfilled.

To test whether the assumptions of linearity, homoscedasticity and independence were met by the data, rigorous checks were undertaken by inspecting the normal probability plot and residuals scatterplot. An examination of the normal

probability plot of indicated that the residual plots were almost close to the normal straight diagonal line, suggesting that the residuals were approximate normal distribution. In addition, the residual scatterplot verified that the residuals were linear and homoscedastic. Therefore it is safe to assume that the assumptions underlying regression analysis had not been violated.

To detect for the presence of multicollinearity, the tolerance value, variance inflation factor (VIF) and condition index of each variable entered the resulting equation were calculated. The results of the analysis, presented in Appendix G, showed that all independent variables in the regression equation had high tolerance values ranging from 0.714 to 1.0. None of the VIFs exceeded the maximum recommended value of 10, showing an absence of multicollinearity problem (Mason and Perreault 1991). The condition index of each variable was also examined. The highest index was 20.222, much higher than 15, the cut-off value (Belsley 1991). However, an examination of the proportion of variance decomposition values indicated that none of them were substantial. Thus, it can be concluded that multicollinearity should not pose a problem in the regression results.

8.6.1 Hypermarket

Table 8.13 summarises the results of the multiple regression analysis with hypermarket as the dependent measure. As the table indicates, the final regression model was found to be statistically significant ($F = 7.08$, $p < 0.001$). The explanatory power of this model, as reported by the adjusted R^2 value was 0.051, indicating that 5.1 percent of the variability in the hypermarket could be explained by the independent variables.

Two lifestyle variables entered the final regression equation. Traditional family emerged as the best predictor as it was highly significant in explaining hypermarket (3.6 percent). This was followed by innovativeness and accounted for an additional 1.5 percent of the variation in hypermarket patronage.

A positive sign of beta coefficient on traditional family ($\beta = 0.18$, $t = 2.748$, $p < 0.01$) indicated that consumers who are traditional family oriented were more likely to patronise hypermarket frequently than those who are less traditional family oriented. A significant positive relationship between innovativeness and hypermarket ($\beta = 0.141$, $t = 2.145$, $p < 0.05$) suggested that individuals who are more innovative are more likely to patronise hypermarket than those who are less innovative.

Table 8.13 Regression analysis: predictors of hypermarket

Final stepwise regression					
Step	Variable entered	t to enter	R ²	Adj. R ²	F-ratio
1	Traditional family	3.067**	0.040	0.036	9.408***
2	Innovativeness	2.145*	0.060	0.051	7.080***
Final regression equation					
Variable	B	S. E.	Beta	t-value	
(Constant)	0.991	0.480	–	2.065*	
Traditional family	0.276	0.100	0.180	2.748**	
Innovativeness	0.220	0.103	0.141	2.145*	

Note: none of the previously entered variables was removed in subsequent steps
t-value of the estimate: /t-value/ > 1.64, $p > 0.1$; /t-value/ > 1.96, $p > 0.05$
Significance level: * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$

The relative importance of predictor variables in the final equation was indicated by their standardised beta coefficients. The beta coefficient of traditional family was the highest (0.18), indicating that this variable was more important in explaining hypermarket than was innovativeness (0.14).

8.6.2 Department Store

Table 8.14 presents the summarised results of multiple regression analysis of variables with department store as the dependent measure. The overall F-test for the final regression model was found to be statistically significant ($F = 21.055$, $p < 0.001$). Innovativeness was the only variable entered the regression equation. The proportion of shared variance as reported by adjusted R^2 value equalled 0.082. This means that only 8.2 percent of the variance in the department store was accounted for by the innovativeness variables. The positive beta coefficient on innovativeness ($\beta = 0.293$, $t = 4.589$, $p < 0.001$) indicated that consumers who are more innovative tend to shop from department store compared to those who are less innovative.

Table 8.14 Regression analysis: predictors of department store

Final stepwise regression					
Step	Variable entered	t to enter	R ²	Adj. R ²	F-ratio
1	Innovativeness	4.589***	0.086	0.082	21.055***
Final regression equation					
Variable	B	S. E.	Beta	t-value	
(Constant)	2.214	0.264	–	8.375***	
Innovativeness	0.391	0.085	0.293	4.589***	

t-value of the estimate: /t-value/ > 1.64, p > 0.1; /t-value/ > 1.96, p > 0.05
 Significance level: *** p < 0.001

8.6.3 Specialty Department Store

Table 8.15 summarises the results of the multiple regression analysis with specialty department store as the dependent measure. As the table indicates, the final regression model with specialty department as dependent variable was found to be statistically significant (F = 10.52, p < 0.001). The explanatory power of this model, as reported by the adjusted R² value was 0.175, indicating that 17.5 percent of the variability in the specialty department store could be explained by the independent variables.

The stepwise ordering of the predictor variables that entered the equation is as follows. Ethnic1 (dummy variable of ethnicity) was the first variable that entered the equation as it was the most salient in explaining specialty department store (8.2 percent). At step 2, innovativeness entered the regression equation and accounted for an additional 3.2 percent of the variation in specialty department store. Age entered the regression equation at step 3 and accounted for an additional 3.4 percent of the variation in specialty department store. At step 4, ethnic conscious entered the

equation and contributed for an additional 1.3 percent of the variation. Finally, at step 5, marital status entered the equation and accounted for an additional 1.4 percent of the variation in specialty department store.

Table 8.15 Regression analysis: predictors of specialty department

Final stepwise regression					
Step	Variable entered	t to enter	R ²	Adj. R ²	F-ratio
1	Ethnic1	-4.582***	0.086	0.082	20.998***
2	Innovativeness	3.041***	0.122	0.114	15.508***
3	Age	3.122**	0.159	0.148	13.992***
4	Ethnic conscious	2.098**	0.175	0.161	11.756**
5	Marital status	-2.185**	0.193	0.175	10.52*

Final regression equation				
Variable	B	S. E.	Beta	t-value
(Constant)	0.494	0.489	-	1.009
Ethnic1	-0.749	0.148	-0.331	-5.063***
Innovativeness	0.031	0.093	0.209	3.328***
Age	0.174	0.044	0.293	3.944***
Ethnic conscious	0.252	0.104	0.156	2.438*
Marital status	-0.344	0.158	-0.157	-2.185*

Note: none of the previously entered variables was removed in subsequent steps
t-value of the estimate: /t-value/ > 1.64, p > 0.1; /t-value/ > 1.96, p > 0.05
Significance level: * p < 0.05; ** p < 0.01; *** p < 0.001

As shown in the final regression equation in Table 8.15 above, specialty department store was significantly related to ethnic1 ($\beta = -0.331$, $t = -5.063$, $p < 0.001$), innovativeness ($\beta = 0.209$, $t = 3.328$, $p < 0.001$), age ($\beta = 0.293$, $t = 3.944$, $p < 0.001$), ethnic conscious ($\beta = 0.156$, $t = 2.438$, $p < 0.05$) and marital status ($\beta = -0.157$, $t = -2.185$, $p < 0.05$). The negative sign of beta coefficient on ethnic1 implied

that Chinese respondents, as compared to Malay, are less likely to patronise specialty department store. Innovativeness was positively related to specialty department store, implying that individuals who are more innovative are more likely to patronise specialty department store than those who are less innovative. A positive relationship between age and specialty department store suggests that the older the respondents, the more likely they were to purchase from specialty department store. Ethnic conscious also was positively correlated to specialty department store. This positive relationship suggests that consumers who are more ethnic conscious tend to patronise specialty department store more frequently than those who are less ethnic conscious. A negative sign of beta coefficient on marital status suggested that single respondents tend to patronise specialty department store more frequently than their married counterparts.

The relative importance of variables was indicated by their standardised beta coefficients (β). As the final regression equation in Table 8.15 shows, the absolute value of the beta coefficient for ethnic1 was the highest (0.331). The next most important was age (0.293) and innovativeness (0.209), followed by ethnic conscious (0.156) and marital status (0.157)

8.6.4 Specialty Store

Table 8.16 presents the summarised results of multiple regression analysis of variables with specialty store as the dependent variable. The overall F-test for the final regression model was found to be statistically significant ($F = 17.221$, $p < 0.001$). Innovativeness was the only variable entered the regression equation with the proportion of shared variance as reported by adjusted R^2 value equalled 0.067. This

means that only 6.7 percent of the variance in the specialty store was accounted for by the innovativeness variable. The positive beta coefficient on innovativeness ($\beta = 0.267$, $t = 4.15$, $p < 0.001$) indicated that consumers who are more innovative tend to shop from department store compared to those who are less innovative.

Table 8.16 Regression analysis: predictors of specialty store

Final stepwise regression					
Step	Variable entered	t to enter	R ²	Adj. R ²	F-ratio
1	Innovativeness	4.150***	0.071	0.067	17.221***
Final regression equation					
Variable	B	S. E.	Beta	t-value	
(Constant)	1.341	0.280	–	4.784***	
Innovativeness	0.375	0.090	0.267	4.150***	

t-value of the estimate: /t-value/ > 1.64, $p > 0.1$; /t-value/ > 1.96, $p > 0.05$
 Significance level: *** $p < 0.001$

8.6.5 Catalogue

The results of the multiple regression analysis with catalogue as the dependent measure is summarised in Table 8.17. As the table indicates, the final regression model was found to be statistically significant ($F = 12.238$, $p < 0.001$). The explanatory power of this model, as reported by the adjusted R² value was 0.091, indicating that 9.1 percent of the variability in the catalogue shopping could be explained by the independent variables.

Two predictor variables entered the final regression equation. Gender emerged as the best predictor as it was highly significant in explaining catalogue shopping (7.1

percent). This was followed by education and accounted for an additional 2 percent of the variation.

Table 8.17 Regression analysis: predictors of catalogue

Final stepwise regression					
Step	Variable entered	t to enter	R ²	Adj. R ²	F-ratio
1	Gender	4.258***	0.075	0.071	18.135***
2	Education	2.437***	0.099	0.091	12.238***
Final regression equation					
Variable	B	S. E.	Beta	t-value	
(Constant)	2.100	0.193	–	10.873***	
Gender	0.570	0.133	0.273	4.281***	
Education	0.166	0.068	0.155	2.437**	

Note: none of the previously entered variables was removed in subsequent steps
t-value of the estimate: /t-value/ > 1.64, p > 0.1; /t-value/ > 1.96, p > 0.05
Significance level: * p < 0.05; ** p < 0.01; *** p < 0.001

A positive beta coefficient on gender ($\beta = 0.273$, $t = 4.281$, $p < 0.001$) suggests that female consumers tend to shop from catalogue than their male counterparts. A positive relationship between education and catalogue ($\beta = 0.155$, $t = 2.437$, $p < 0.01$) indicated that better-educated consumers were more likely to shop from catalogues than those who were less educated.

The relative importance of predictor variables in the final equation was indicated by their standardised beta coefficients. The beta coefficient of gender was the highest (0.273), indicating that this variable was more important in explaining catalogue than was education (0.155).

8.7 Summary of Results

This final section summarises the results and conclusions drawn from the analysis. The major purpose for utilising multiple regression analysis in this study was to discover which personal characteristic variables best predicts the criterion variables (information sources, shopping orientations, importance of store attributes and store patronage). The independent variables were the three sets of personal characteristics namely religion (religious affiliation, intrapersonal religiosity and interpersonal religiosity), lifestyle (ethnic conscious, innovativeness, traditional family and fashion conservative) and demographics (gender, age, marital status, ethnicity, work status, education and income). An automated selection procedure of stepwise regression was used to allow the predictor variables to enter or leave the regression equations, as they were significant.

Several noteworthy findings emerged from the analysis that provides further clarification of religious influences on patronage behaviour. The regression results, summarised in Table 8.18, have demonstrated that:

1. When controlling for the effect of other predictor variables, religious affiliation still has an influence on the perceived importance of store attributes dealing with reputation and price.
2. When controlling for the effects of other predictor variables, intrapersonal religiosity still has an influence on use of information source (media), shopping orientation (quality conscious, impulsive shopping and price conscious) and perceived importance of store attributes (merchandise, attractiveness and price).

3. Intrapersonal religiosity is the strongest predictor of store attribute dealing with price relative to other variables.
4. When controlling for the effects of other predictor variables, interpersonal religiosity has an influence on use of information source (media and personal), shopping orientation (quality conscious, impulsive shopping and price conscious) and perceived importance of store attributes (merchandise, reputation, attractiveness and price).
5. Interpersonal religiosity is the strongest predictor of personal source, quality conscious, price conscious and store attributes dealing with reputation and attractiveness relative to other variables.
6. Religiosity provides reasonably good predictor of patronage behaviour compared to religious affiliation. These results confirm the previous findings obtained through the use of analysis of variance.

Based on the above results, Hypotheses 3a, 3b, 3d and 4d were rejected while Hypotheses 3c, 4a, 4b and 4c were accepted.

In the ensuing chapter, the major conclusions and findings of this study will be summarised. The chapter also reflects on the theoretical and practical implications of the main findings, discusses the limitations of the study and makes recommendations for areas of needed future research.

Table 8.18 Summary of results: multiple linear regression analysis

Predicted variable	Equation	Adj. R ²
Media	0.013 + 0.375 Innovativeness*** – 0.236 Fashion conservative*** + 0.211 Intrapersonal*** + 0.15 Traditional family*	0.254
Personal	1.493 + 0.373 Interpersonal*** – 0.245 Intrapersonal*** + 0.153 Innovativeness*	0.119
Brand conscious	0.956 + 0.395 Innovativeness*** + 0.195 Ethnic conscious** – 0.122 Fashion conservative*	0.222
Shopping enjoyment	0.907 + 0.33 Innovativeness*** + 0.197 Traditional family** – 0.17 Fashion conservative* + 0.163 Ethnic conscious** + 0.128 Gender** – 0.126 Ethnic2*	0.253
Fashion conscious	2.059 + 0.514 Innovativeness*** + 0.281 Education*** – 0.229 Age*** + 0.137 Marital status** – 0.11 Fashion conservative* + 0.102 Ethnic2*	0.435
Quality conscious	1.804 + 0.191 Interpersonal** + 0.183 Innovativeness** – 0.176 Age** + 0.145 Income* + 0.162 Intrapersonal*	0.174
Impulsive shopping	4.088 + 0.149 Innovativeness* – 0.148 Intrapersonal* – 0.162 Interpersonal*	0.079
Price conscious	1.726 + 0.213 Interpersonal** + 0.168 Innovativeness** + 0.156 Intrapersonal* – 0.139 Income* + 0.123 Gender*	0.163
Merchandise	0.607 + 0.163 Innovativeness* + 0.153 Intrapersonal** + 0.142 Interpersonal* + 0.139 Ethnic conscious*	0.126

Reputation	3.175 + 0.195 Interpersonal** + 0.193 Religion1** + 0.174 Gender** + 0.171 Innovativeness**	0.141
Attractiveness	4.219 – 0.175 Interpersonal* – 0.165 Intrapersonal* + 0.146 Innovativeness*	0.093
Price	2.812 + 0.288 Intrapersonal*** – 0.178 Religion2*** – 0.162 Age** – 0.146 Income** – 0.143 Gender** + 0.137 Interpersonal*	0.263
Hypermarket	0.991 + 0.18 Traditional family** + 0.141 Innovativeness*	0.051
Department store	2.124 + 0.293 Innovativeness***	0.082
Specialty department	1.009 – 0.331 Ethnic1*** + 0.293 Age*** + 0.209 Innovativeness*** – 0.157 Marital status* + 0.156 Ethnic conscious*	0.175
Specialty store	1.341 + 0.267 Innovativeness***	0.067
Catalogue	2.1 + 0.273 Gender*** – 0.155 Education**	0.091

*** denotes significance at $p \leq 1\%$; ** denotes significance at $p \leq 5\%$; * denotes significance at $p \leq 10\%$.

CHAPTER 9

SUMMARY, DISCUSSIONS AND IMPLICATIONS

9.0 Introduction

This empirical study has attempted to establish a link between religion and aspects of consumer retail patronage behaviour with a view to expanding the body of knowledge in this research area. At the causality level, the results reported in the preceding two chapters provide support for the conclusions of earlier studies that indicates religion as a significant personal characteristic construct in explaining components of retail patronage behaviour.

The objective of this final chapter is to summarise and draw conclusions on the main findings of the study, discuss their implications for marketing theory and practices, as well as the limitations of the study and suggestions for future research endeavours. The writing of this chapter is organised into nine main sections as follows. In the first section, a summary of the thesis will be provided. The second section elaborates the results of hypotheses testing. In this section, the researcher consolidates the major findings and compares the findings to previous similar studies. Post analyses are also conducted to explore potential reasons why some of the results ran counter to intuition. The third section presents the revised theoretical model based on the finding of the study. In the fourth section, attention focuses on the main contributions that this has made to the current literature in this area while marketing implications of the findings are presented in the fifth section. The sixth section centers on the methodological limitations of the study, followed by the recommendations

contain suggestions for future research in which the current study could be extended. Concluding remarks will be provided at the end of this chapter.

9.1 Summary of the Thesis

Prior to discussing the research findings in a great detail and highlighting its contribution to the current literature and marketing practices, it is imperative to provide an overview of this thesis and summing-up its findings.

A major focus of this study was to determine the cultural influences in the form of religion on selected aspects of retail patronage behaviour. The origin of this study began when the researcher realised that, despite the apparently considerable effect of culture on a wide variety of consumer behaviours, religion as a cultural subsystem has received much less attention than some other similar areas of influence (e.g. values, nationality or ethnicity). This thesis is intended as a modest contribution towards further research on this subject area.

In order to achieve the objective of establishing the current state of knowledge or the ontological frame with respect to the key facets of the study, the relevant literature and empirical findings from past studies were reviewed. The researcher surveyed the databases made available through the university's auspices, evaluated its relevance with respect to the study and concluded that the study can be effectively and efficiently served through the use of electronic databases as a major supplement to the research process. The concept of focused literature research was employed to ensure that the study can be completed within a reasonable time frame. In addition, searches were made through a broad base of electronic and traditional databases and libraries to ensure that the literature search process was rigorous and extensive.

The review of the relevant literature was presented in two chapters. Chapter Two delved into past studies on the relationship between religion and consumer behaviour. The literature survey has identified two main categories of research themes: studies of consumption in specific religious settings, and studies of the influence of religion on specific consumption behaviours. The latter has been studied from two main perspectives: religious affiliation and religiosity. A distinction can be made between these two constructs: religious affiliation is the identification of individuals to a particular religion and is largely an ascribed condition whereas religiosity, or religiousness, is degree of beliefs in one's religion and is mainly a personal phenomenon. Past consumer literature focusing on these two religious dimensions was extensively reviewed. These studies collectively suggest considerable evidence that religious construct can be used as a reliable and valid indicator to help explain variance in some aspects of consumer behaviour.

Chapter Three was a logical extension of the literature review to present the theoretical and conceptual framework and a model which forms the basis of the study. Two comprehensive models of retail patronage namely Darden's (1980) consumer behaviour model of retail patronage and Sheth's (1983) integrative theory of shopping and patronage preference, were reviewed. These two models and their subsequent empirical testing served as the basis for the development of a conceptual model to function as the framework of the study. The components of the conceptual model were examined using previous research in each of the areas. Five main constructs of the model were discussed in this chapter, namely, personal characteristics (religion, lifestyle and demographics), information sources, shopping orientation, store attributes and store patronage. Four sets of hypotheses were formulated based on the

model and pertinent findings in the reported literature.

Chapter Four provided background to Malaysia, the setting of the present study. The discussion helped to set Malaysia into context as a prime model of multi-cultural country in which religious values plays a significant part in sculpting the social behaviour of its society. In this chapter, basic information on Malaysia including its geographical location, historical background and economic development, demographic and social structure of its people were described. Some selected aspects of consumer behaviour in Malaysia were discussed. The compositions of ethnic and religious groups were highlighted. In addition to these, the country's four major religious groups namely Islam, Buddhism, Hinduism and Christianity were discussed to provide a deeper understanding of cultural value differences based on religious beliefs and practices.

The purpose of Chapter Five was to explain the methodological aspect of this study. In this chapter, the research methodology including paradigm and method of the study, data collection process, survey instrument, sampling process and fieldwork management were presented in detail. The survey method was chosen as the most appropriate data collection technique. The data was collected using a structured questionnaire developed based on inventories used in past similar studies. All variables, with the exception of demography, were measured using the five-point Likert scale. The questionnaire was produced in two versions, English and Malay. The translation process was carried out using the back-translation procedure. This method ensures that any problems with language equivalency can be identified and resolved. Both versions were then pilot tested in order to examine its clarity and relevance to the

purpose of the research, which resulted in some modifications to the questions. Using area sampling procedure, three hundred respondents living in the municipal area of Kuala Lumpur were targeted as the sample for this research from which 226 usable responses were secured for statistical analysis.

After returning from the fieldwork, the researcher developed the analytical techniques for the purpose of quantitative data analysis. The statistical techniques employed in this study for analysing the survey data were reported in Chapter Six. The chapter began with the choice of statistical package to analyse the data. It was determined that the Statistical Package for the Social Science (SPSS) version 11.5 is the most suitable statistical programme to be applied for this study. Next, factors that influence the choice of statistical techniques in this research were outlined. The following factors were discussed: objectives and focus of the analysis, sample type and size, the level of measurement and the distribution pattern of the data. Procedures and assumptions pertaining to univariate (descriptive statistics), bivariate (univariate ANOVA) and multivariate (factor analysis, multivariate ANOVA and multiple linear regression) techniques used in this study were briefly discussed.

The data analysis and empirical findings were reported in Chapters Seven and Eight. Initially, exploratory factor analysis was executed to condense the dimensionality of religiosity, lifestyle, information sources, shopping orientation and store attribute variables. These variables were subjected to principal components with varimax rotation to (1) summarise the important information in the data into a smaller set of factors of newly correlated composite dimensions to express what was common among the original items and (2) to generate component scores for entry to subsequent

analysis. The number of factors obtained for each set of items was determined by taking into consideration the eigenvalues and meaningfulness of the interpretation of the resulting factors. Based on this analysis, two factors of religiosity were extracted, labelled intrapersonal religiosity and interpersonal religiosity. Factor analysis on lifestyle variables produced four factors, named as ethnic conscious, innovativeness, traditional family and fashion conservative. Factor analysis on information source variables produced two factors, labelled media and personal. In addition, six factors representing shopping orientation (i.e. brand conscious, shopping enjoyment, fashion conscious, quality conscious, impulsive shopping and price conscious) and four factors representing store attributes (i.e. merchandise, reputation, attractiveness and price) were extracted respectively.

The first two set of hypotheses were tested by means of multivariate analysis of variance (MANOVA) followed by univariate ANOVA when MANOVA was significant. The first set of hypotheses was tested to determine whether consumers affiliated with different religions (Islam, Hinduism, Buddhism and Christianity) behaved differently in areas of lifestyle, information source, shopping orientation, importance of store attributes and store patronage. The second set of hypotheses predicted that consumers with different levels of religiosity (low, medium, high) behaved differently in areas of lifestyle, information source, shopping orientation, importance of store attributes and store patronage.

The remaining hypotheses were tested in Chapter Eight to examine the usefulness of religious variables as predictors of selected patronage behaviour relative to other personal characteristic variables. Hypothesis H3 stated that holding all other

predictors constant, there is a significant relationship between religious affiliation and information sources, shopping orientations, importance of store attributes and store patronage. Hypothesis H4 posited that holding all other predictors constant, there is a significant relationship between consumer religiosity and information sources, shopping orientations, importance of store attributes and store patronage. Seventeen stepwise multiple linear regressions were performed to test these hypotheses. Table 9.1 summarises the results of hypotheses testing.

Table 9.1 Results of hypotheses testing

Hypothesis	Result
H1a There are significant differences in lifestyle among consumers affiliated with different religions.	Accepted
H1b There are significant differences in use of information source among consumers affiliated with different religions.	Rejected
H1c There are significant differences in shopping orientation among consumers affiliated with different religions.	Rejected
H1d There are significant differences in perceived importance of store attributes among consumers affiliated with different religions.	Accepted
H1e There are significant differences in store patronage among consumers affiliated with different religions.	Accepted
H2a There are significant differences in lifestyle among consumers with different levels of religiosity.	Accepted
H2b There are significant differences in use of information source among consumers with different levels of religiosity.	Accepted
H2c There are significant differences in shopping orientation among consumers with different levels of religiosity.	Accepted

H2d	There are significant differences in perceived importance of store attributes among consumers with different levels of religiosity.	Accepted
H2e	There are significant differences in store patronage among consumers with different levels of religiosity.	Rejected
H3a	Holding all other predictors constant, there is a significant relationship between religious affiliation and use of information sources.	Rejected
H3b	Holding all other predictors constant, there is a significant relationship between religious affiliation and shopping orientation.	Rejected
H3c	Holding all other predictors constant, there is a significant relationship between religious affiliation and perceived importance of store attributes.	Accepted
H3d	Holding all other predictors constant, there is a significant relationship between religious affiliation and store patronage.	Rejected
H4a	Holding all other predictors constant, there is a significant relationship between consumer religiosity and use of information source.	Accepted
H4b	Holding all other predictors constant, there is a significant relationship between consumer religiosity and shopping orientation.	Accepted
H4c	Holding all other predictors constant, there is a significant relationship between consumer religiosity and perceived importance of store attributes.	Accepted
H4d	Holding all other predictors constant, there is a significant relationship between consumer religiosity and store patronage.	Rejected

In the remainder of this chapter, findings of the study are discussed in detail. Furthermore, academic contributions of the study to the current literature and its marketing implications are offered. Finally, limitations of the study and recommendations for further consideration of the topic are made.

9.2 Discussion of Findings

This section reviews the major findings of this study. The findings are compared to previous similar studies, trying to evaluate the usefulness of religious affiliation and religiosity in explaining consumer behaviour. Analyses are also conducted to explore potential reasons that some hypotheses were not supported.

9.2.1 Religious Affiliation

Based on existing lines of discussion in consumer behaviour literature, this study hypothesized that consumers affiliated with different religions behaved differently in areas of lifestyle, information source, shopping orientation, importance of store attributes and store patronage. Four religious categories included in the analysis were Islam, Hinduism, Buddhism and Christianity. The data analysis revealed the existence of an overall significant difference among members of the four religious faiths in three hypothetical consumer behaviours namely lifestyle, perceived importance of store attributes and store patronage.

The people of the Islamic faith, as compared to their Christian counterparts, were reported to be more ethnic conscious, to place greater emphasis on traditional family values and display greater fashion conservatism. The members of two other religions also exhibited significantly different behaviours. Hindus were more likely to

be ethnic conscious as compared to Christians whilst Buddhists were less likely to display fashion conservatism as compared to Muslims. One possible rationale for the statistical distinction between Muslims and the other three religious adherents in relation to these lifestyle factors is that, Islam has not evolved significantly with modernity. The ardent believers of Islam still follows their traditional beliefs and values, even though the other religions have reassigned these priorities in line with the modern ways of living and lifestyles.

Significant differences were also found in the level of importance attached to store attributes among consumers affiliated with different religious faiths. Of four store attributes under examination, two were found to be significantly related to religious affiliation, namely reputation and price. Mean comparisons showed that Muslim consumers exceeded their Buddhist counterparts in their importance judgement on both attributes. No rationale is immediately apparent, however, for the discrepancy between Muslim and Buddhist consumers in their evaluation of the two store attributes. It is possible that these attributes, for unknown reasons, especially germane to the Muslim and Buddhist subcultures. Further studies are warranted to confirm this preliminary finding.

The results indicated an overall significant difference among groups with regards to their store patronage. Subsequent tests indicated significant differences across the four religious groups with respect to patronage of specialty department store. No significant differences among religious groups were found for hypermarket, department store, specialty store and catalogue shopping. This suggests that the effect of religious affiliation on store patronage is rather limited.

No significant differences were observed among members of the four religions in their use of information sources and shopping orientations, findings that apparently contradicts with previous studies. One possible explanation for this lack of support may be due to the different context of investigation. The current study focuses on the purchase of clothing whereas past studies use the purchase of expensive items as the basis of the study. The way the variables were operationalised may be another contributing factor. This study examined religious differences in consumers' use of information sources while Delener (1989) focuses on external information search. Shopping orientation construct examined in this study also entails slightly different operationalisations than those of general shopper types studied by Bailey and Sood (1993), Sood and Nasu (1995) and Essoo and Dibb (2004).

From the results of this study, it can be seen that religious affiliation has some effects on consumer behaviour but not a great one – its effects were limited only to certain components of the proposed model. No significant differences were found across the groups with regards to information sources and shopping orientation, indicating the lack of explanatory power of religious affiliation in explaining variation in these aspects of consumer behaviour. This raises an important issue concerning the effectiveness of religious affiliation as a valid predictor of consumer behaviour in a retail patronage context.

Referring back to the pertinent literature, the major focus of consumer behaviour studies examining religious affiliation was on the similarities and differences in consumption-related activities between consumers raised in different religious traditions. Although the results reported were encouraging, findings in this area of research are not totally consistent and there appears to be little conclusive

empirical evidences that religious affiliation may serve as an important source of variation in several consumption behaviours. Specifically, there exist two competing views about the role that religious affiliation plays in affecting consumer behaviour. One prominent position developed in the literature suggests the existence of behavioural differences between consumers of different religious groups (Hirschman 1983; Bailey and Sood 1993; Essoo and Dibb 2004). The other point of view maintained by a smaller number of researchers have casts doubt on these findings, however, concluding that the effects of religious affiliation on consumer behaviour are limited or insignificant (McDaniel and Burnett 1990). Returning then to the data presented, the finding of the present study appears to be in tentative agreement with the latter track of literature – religious affiliation in general has not had a significant impact on consumer behaviour. It is noteworthy that more similarities exist than differences. Where significant differences were indicated, the variation among the four religious groups was relatively small. Thus, the common notion in the extent marketing literature about the effectiveness of religious affiliation as consumers' behavioural differentiation appears in question.

Recognising the specific cultural environment where this study was carried out, it is not surprising that the study's results reveal little supportive patterns for the effect of religious affiliation on consumer behaviour. The current study is one of the first empirical studies done on consumers in an Eastern culture (i.e. Malaysia) while most other studies reported in the current literature have been conducted among North Americans who are predominantly Jews, Catholics or Protestants. Thus, the failure to find significance in the sample of this study is essentially an indication that previous findings cannot be generalised to the religious segments in Malaysia.

These seemingly contradictory findings appear much more orderly upon closer inspection of the potential reasons that may account for the limited power of religious affiliation in explaining consumer behaviour. The first possible explanation relates to the explanatory power of religious affiliation relative to other personal characteristic factors. Given the fact that religious background is a sub-category of culture and consumers' personal values (Sheth 1983), it is feasible to speculate that the influence of overall culture (e.g. collectivism) as a dominant source of communality (Hofstede 1991) and other personal characteristic variables such as lifestyle, ethnic values, beliefs and attitudes may serve as stronger indicators of consumer behaviour than the influence of religious affiliation.

Another argument for the finding lies in the poor performance of religious affiliation measure. As compared to religiosity, "religious affiliation classifications tend to be operationally vague to produce consistent results" (McDaniel and Burnett 1990, p. 110). McDaniel and Burnett (1990) offered two reasons for the apparent lack of predictability in using religious affiliation as a predictor variable. First, it is possible that the variation of religiosity within each religious group is greater than the variation between religious groups. Thus, the effect of religious affiliation tends to be dominated by the degree to which the members of a religion accept the major beliefs of their religion. Second, it is plausible that the religious affiliation construct may have an inherent problem as a classification variable in measuring religion since religious beliefs within religious categories differ to some extent while significant theological similarities may occur across religious categories. Thus, when these theological differences and similarities are manifested in individual behaviour

activities, the result may be some problems in the performance of religious affiliation as a stable predictor variable (McDaniel and Burnett 1990).

On further reflection, the small and insignificant effect of religious affiliation on some aspects of consumer behaviour investigated in this study may be attributable to another two potential reasons. First, by its very nature, the categorical measure of religious affiliation cannot capture the strength of one's affiliation with a particular religious group. Some ambiguity and error could be introduced since people may have a preference for one denomination but an affiliation with another. Second, due to its apparent objectivity, religious affiliation measure can only estimates the total number of people affiliated with a particular religious faith and cannot indicates how strongly one committed to his/her religion. One may simply indicate an affiliation with a particular religion, but due to various reasons, does not follow the principles and teachings of his/her religion. This point to the fact that the impact that religion might have on consumer behaviour would depend on the nature of the major beliefs and practices of the religion and the extent to which its members accept those beliefs and practices. Only high level of religiosity will guarantee complying with religion norms that are binding.

9.2.2 Religiosity

The second set of hypotheses tested the influence of religiosity on the five components of retail patronage behaviour model. The religiosity construct was viewed from a multidimensional approach and accordingly two factors of religiosity were identified: "intrapersonal religiosity" and "interpersonal religiosity."

The findings indicate significant differences in lifestyle among consumers with different levels of religiosity. In particular, ethnic conscious, traditional family and fashion conservative dimensions were influenced by the degree of intrapersonal and interpersonal religiosity. In each case, the relationship was in a positive direction; consumers with a high degree of intrapersonal and interpersonal religiosity tend to be more ethnic conscious, placed greater emphasis on traditional values within family and more conservative in fashion style. These findings are intuitively appealing and consistent with those of psychological researchers who found evidence that the ardent religious believers are generally being more conservative, having greater concern for moral standards and possessing more traditional attitudes relative to their less religious counterparts (Grasmick, Wilcox and Bird 1990; Lewis and Maltby 2000; Duriez 2003; Cukur, de Guzman and Carlo 2004; Roccas 2005). McMurry (1978) for instance, considers religion as a reactive institution which exerts conservative influence and concludes “the subjects who are exposed to more of this influence through greater religious involvement should be more traditional” (p. 83).

The findings also suggest an overall significant difference among consumers with different levels of religiosity in their use of information sources. Intrapersonal measure of religiosity was associated to media sources of information (i.e. television, magazine and newspaper advertising). It is to be noted that the relationship was in a positive direction, implying that highly religious individuals are more inclined than less religious individuals to search for more information from media advertisements. This finding is clearly in contrast to Delener (1989) who found evidence that religious consumers are less likely to search for information. Perhaps one possible explanation that religious consumers tend to utilise more information from media advertisements

may be attributed to the fact that highly religious individuals are characterised by more submissive and trusting attitudes, as suggested in the psychological literature (Tate and Miller 1971; Hamby 1973; Kahoe 1974).

Alternatively, the effect could be partly explained by the theory of perceived risk. Schiffman and Kanuk (1991) indicated that one of the reasons consumers acquire market information is to reduce uncertainty and risk in their purchasing decisions. Based on this theory, it is suggested that risk reduction strategies such as greater information seeking from media advertisements (Schiffman and Kanuk 1991) might be adopted by religious individuals to relieve their anxiety at the possibility of any unfavourable outcome of their choice decisions. As previous findings have confirmed (Gentry et al. 1988; Delener 1990b; Smith and Frankenberger 1991; Smith et al. 2005), due to less secure and self-confidence feeling, highly religious individuals are more likely to perceive higher amount of risks in their purchasing decisions compared to their less religious counterparts.

Questionnaire items linked with the interpersonal religiosity factor indicate that this religiosity dimension relates to an individual's affiliation with his/her religious groups and organisation. In the present study, this religiosity dimension was found to be related to personal sources of information (i.e. friends, family/relatives and salesperson's advice). This finding infers that consumers who scored high on this scale not only active in religious group activities but also will tend to be active in interpersonal communications by seeking advice and receiving information on shopping matters. No clear evidence exists on the effect of religiosity on use of information from personal sources. Nevertheless, it has been suggested in the psychological literature that religious individuals are more dependent and sociable

(Hamby 1973; Wiebe and Fleck 1980) and therefore are more likely to rely on interpersonal information sources including friends, family and salespersons.

To further account for the significant effect of interpersonal religiosity on use of information from these three personal sources, individuals' participation in religious group activities may have rated as a subtle factor. In this regard, the theory of interpersonal influence offers insights. For instance, McGuire's (1968) concept of influenceability explains that individuals differ in their responsiveness to social influence. He concluded that susceptibility to interpersonal influence is a general trait that varies across persons, that a person's relative influenceability in one situation tends to have a significant positive relationship to his or her influenceability in her range of other social institutions, and that conformity and persuasibility exist across occurrences. Bearden, Netemeyer and Teel (1989) further developed this concept with a two-dimensional model of interpersonal influence type: normative influence and informational influence. They referred normative influence as "the need to identify with or enhance one's image in the opinion of significant others through the acquisition and use of products and brands, the willingness to conform to the expectations of others regarding purchase decisions" (Bearden et al. 1989, p. 473). Informational influence, on the other hand, is referred to as "the tendency to learn about products and services by observing others or seeking information from others" (Bearden et al. 1989, p. 473).

Applying the above concept to the present finding, it is argued that those who scored high on interpersonal religiosity scale tend to be more susceptible to interpersonal influences through their participation in religious group activities where active information transmission, either verbal or non-verbal, occurs among members

of the group. Stated otherwise, religious groups provides a setting in which individuals with shared religious value orientations can informally interact on a regular basis while nurturing friendships and social ties, allowing religious groups to serve as a frame of reference for individuals (LaBarbera and Gurhan 1997; Sigauw and Simpson 1997). Thus, it is likely that those who highly committed to their religious groups (e.g. by regularly participating in the activities run by religious organisation) are more susceptible to both normative and informational influences through information sharing, i.e. the extent to which individuals transmit information to others about consumption domains (Hirschman 1983). Perhaps this may explains why those who scored higher in interpersonal religiosity were found to rely more on interpersonal sources such as friends, family and salespersons as their main reference for marketing-relevant information.

Another finding of this study suggests that significant differences exist in shopping orientation among consumers with different levels of religiosity. Both dimensions of religiosity (intrapersonal and interpersonal) may be significant in predicting certain aspects of shopping orientation. More specifically, three shopping orientation factors, namely price conscious, quality conscious and impulsive shopping, were found in the present study to be consistently related to religiosity. It appears that highly religious individuals, as defined by both intrapersonal and interpersonal measures of religiosity, are most likely to be concerned with price (i.e. prone to look for deals), look for quality in product when they shop and less likely to make impulsive purchase decision. No direct comparison of this finding to those previous studies could be made because of differences in context and measurement devices employed. In general, however, the results appear to support the notion that

individuals with different levels of religiosity will have differences in their shopping behaviour. In particular, a positive relationship between religiosity and price conscious orientation revealed in this study is consistent with the work of Smith and Frankenberger (1991) who found evidence that price sensitivity is positively related to religiosity. The finding also parallel to the findings of two other recent works of Sood and Nasu (1995) and Essoo and Dibb (2004) who found indications that religious consumers tend to be more economic, buying product on sale and shopping in stores with lower prices.

The finding that indicate a positive relationship between religiosity and quality conscious orientation is essentially contrasted the results of Essoo and Dibb (2004) who have found that devout consumers are less demanding in their shopping behaviour than casually religious consumers, in that they attach less importance to product quality, nutritional value of products and quality of service. But the present finding can be corroborated by a previous study which found that consumers with high religiosity will prefer products that are of high quality (Smith and Frankenberger 1991). This finding is also congruent with McDaniel and Burnett (1990), who empirically showed that individuals highly committed to their religion place considerable emphasis on product quality when selecting a retail store. A logical explanation for this phenomenon may be based on a risk aversion effect. According to Delener (1987), individuals with a high degree of religious values are “narrow categorizer” i.e. low tolerance for error. Thus, these consumers are more likely to be worried about the potential risk associated with the products they bought, as the empirical findings of Delener (1990b), Smith and Frankenberger (1991) and more recently, Smith, Kahle, Frankenberger and Batra (2005) have suggested. As a result,

they tend to look for high quality products as a means to avoid post-purchase disappointment and/or at least to minimise any possible negative consequences of their purchase decisions.

The present study also indicates that those high in religiosity tend to be less impulsive when making purchase decision. While this effect of religiosity on shopping impulsiveness has not been investigated before, the finding is apparently consistent with the psychological literature which suggest that highly religious individuals tend to behave in a relatively more mature, disciplined and responsible manner (Hamby 1973; Wiebe and Fleck 1980; Francis and Bourke 2003). These characteristics might manifest themselves in the way consumers making their purchase decision, i.e. greater self-restraint from buying on the spur of the moment and more concern about how much they spend or about getting best buys.

It is interesting to note from the analysis of respondents who are categorised as moderate in interpersonal religiosity (i.e. those falling in 'medium' group). This group stood apart as a unique segment of consumers in that they manifested a greater tendency to display brand and fashion conscious orientations. A possible interpretation could be that the individuals who committed to their religious group (although moderate) hold a strong social value and are more susceptible to normative influences as a result of their regular interaction with others affiliated with the same religious organisation. These influences may have created greater awareness in brand and fashion. Both orientations reflect a social/hedonistic approach to shopping because they share an underlying social motivation for consumption (Shim 1996).

The findings also indicate significant differences in perceived importance of store attributes among consumers with different levels of religiosity. The importance

judgements for all four store attributes under examination were found to be influenced by the degree of intrapersonal and interpersonal religiosity, suggesting that consumers upholding certain religious values as important goals to achieve or as important modes of conduct would also prefer certain attributes to be present in the stores they choose to shop in. In particular, the findings of this study indicated that highly religious consumers tend to place a higher level of importance to merchandise related attributes such as quality, brand and variety of selection. This finding is in general agreement with those previously described in a study by McDaniel and Burnett (1990), in which high religiosity consumers tend place a higher level of importance for product quality and assortment of brand. The psychological literature suggests that highly religious individuals are relatively more conscientious than less religious individuals (Wiebe and Fleck 1980). This personal characteristic may have been manifested in the importance placed on product-oriented attributes such as the product quality and brand availability offered by the retail store.

In addition, it was found that consumers higher in their interpersonal religiosity were most likely to attach greater importance on retail store reputation. This desired store attribute perhaps relate to the tendency of individuals who highly committed to their religious group (i.e. interpersonal aspect of religiosity) to be more status-conscious to their need for social recognition from others affiliated with the same religious group. As suggested in control theory, religiosity is a specific manifestation of a general tendency to form strong ties out of a need for conformity and belonging (Grasmick, Bursik, and Cochran 1991). Thus, upscale image attributes such as reputation for fashion and class of clientele (Erdem, Oumlil and Tuncalp 1999), tend to be rated more important by individuals who scored high on

interpersonal religiosity. The finding can also be explained by the concept of perceived risk. Research suggests that wearing apparel as a product class would be relatively high in perceived risk due to its socially visible nature (Zikmund and Scott 1975). Taking into account research results indicating that religious consumers are “narrow categorizer” (Delener 1987) and high in their social risk aversion (Smith and Frankenberger 1991; Smith et al. 2005), it would seem, then, risk reducers such as store reputation (Taylor and Rao 1980) may be judged as important store attributes to some religious consumers.

Another significant finding from this study is that religiosity was related to the importance placed by an individual on the attractiveness of the retail store. An examination of the mean scores indicated that those who scored high on intrapersonal and interpersonal religiosity scales showed a lower preference for retail store attractiveness. While the background literature pertaining to the expected relationship between religiosity and retail store attractiveness is not definitive, the finding seems in line with the psychological literature which suggests that highly religious individuals tend to be more conservative and traditional oriented (Hamby 1973; Barton and Vaughan 1976; McMurry 1978; Cukur et al. 2004) and therefore would attach less importance to store attractiveness. Further, those higher in religiosity were found in this study to attach greater importance to price. This positive relationship between religiosity and store attribute dealing with pricing provides additional support for the earlier finding that highly religious individuals are most likely to be price conscious shoppers. Similarly, a study by Smith and Frankenberger (1991) indicated that consumers with a high degree of religiosity tend to place a high level of importance on pricing criteria when they shop.

The present study also hypothesized that there are significant differences in store patronage among consumers with different levels of religiosity. Contrary to this expectation, the results indicated no significant overall effect of religiosity on store patronage. Taken into account the finding of the present study indicating significant overall effect of religiosity on store attributes, and previous findings suggesting store attributes as significant determinants of store patronage (Shim and Kotsiopoulos 1992b), it seems reasonable to speculate that the effect of religiosity on store patronage is rather indirect through its direct effect on store attributes.

The findings highlight the potential of religiosity as an explanatory construct of consumer behaviour. Despite the small sample size mentioned earlier, religiosity appears to be a significant determinant of consumer behaviour, suggesting that the differences behavioural patterns that come about is a result of one's degree of commitment or adherences to his/her religion. One plausible cause of the observed variation in consumer behaviour attributable to religiosity may be differences in personality traits associated with the degree of religious commitment. Specifically, it is often noted in the literature that highly religious individuals tend to be more conservative and traditional; hence, these traits are seen as the underlying cause for why religiosity is associated with concerns about product quality (McDaniel and Burnett 1990), lower risk tolerance (Delener 1990a) and preference for well-established brands (Wilkes et al. 1986).

A study by Rokeach (1969) demonstrated that religious persons have value systems that differ from those of the less religious and the non-religious (p. 22). Regardless of religious affiliation, codes of behaviour are dissimilarly respected between devout and casually religious individuals. Individuals who are highly

religiously committed (i.e. who value religion as important and are active with religious organisations) may feel obligated to behave in a manner that does not antagonise their religious creeds or contradict with the expectation of others within the same religious group. This is in stark contrast to those who expressed a weak commitment to his/her religion. Because their credence in religious precept is less strong, they might feel unencumbered by the religious principles and thus free to behave in other ways. This difference levels in the degree of religiosity was seen to determine cognitive and behavioural differences in individuals' consumer behaviour across the four sample groups.

The finding that consumers vary considerably in their consumption activities according to their degree of religiosity provides additional support for past studies that religiosity is part of personal traits that exerts a considerable influence on consumers' purchasing behaviour (Wilkes et al. 1986; McDaniel and Burnett 1990; Smith and Frankenberger 1991; Delener 1994; Sood and Nasu 1995; Sigauw and Simpson 1997; Essoo and Dibb 2004). This consistent finding between the present study and the previous ones further suggests that the effects of religiosity on consumer behaviour are replicable across different cultural settings (i.e. Western and Eastern worlds) and religions (i.e. Judeo-Christian and non-Judeo-Christian).

Statistical analysis of the data demonstrated that religion in the form of commitment was more significant than religious affiliation in explaining variability of the dependent variables. This implies that consumer behaviour may not be affected much by nominal affiliation or a group but rather by intensity of adherences and beliefs. Thus, while recognising religious affiliation as a cognitive system and a source of social communality among people, in actuality it is the degree of adherences

to religious faith that plays a dominant role in explaining variation in consumer behaviour. This finding is particularly appealing and consistent with McDaniel and Burnett (1990) who report results indicating religiosity is more influential and serves as a valid predictor of consumer behaviour than religious denomination. This variable should be given consideration in future patronage behaviour model building and research efforts.

9.2.3 Prediction of Patronage Behaviour

In a bid to understand the dynamics of the hypothesized relationships between the two religious dimensions and consumer behaviour, further analysis was conducted using multiple regression analysis. Some selected demographic and lifestyle variables were included as covariates in the regression models to help account for differences due to these personal attributes. The relative influences of these variables on consumer behaviour, however, are beyond the scope of this thesis so no research hypotheses about these variables were formulated. Instead, these variables serve as extraneous and were controlled (by holding them constant) while testing for the possible linear relationship between the variables of particular interest. The following paragraphs summarises the results.

Personal characteristics were entered to predict two factors of information sources. Three lifestyle variables (innovativeness, fashion conservative and traditional family) and one religious variable (intrapersonal religiosity) were found to significantly predicted media information. Religious affiliation and demographic variables were not significant. The adjusted R^2 was 0.254 at a 0.001 significance level. On personal information, the significant predictors were the two religiosity

dimensions (intrapersonal and interpersonal religiosity) and one lifestyle variable (innovativeness). None of the demographic variables were found to be related to personal information. The adjusted R^2 for personal information was 0.119 at a 0.001 significance level.

Personal characteristic variables were entered into the regression model to predict six shopping orientation factors identified from the factor analysis. The adjusted R^2 s ranged from 0.079 to 0.435 at a 0.001 significance level. Three lifestyle variables were significantly associated with brand conscious, namely innovativeness, ethnic conscious and fashion conservative; the first two having positive signs and the last one negative. Demographic factors and religious variables had no significant impact. Shopping enjoyment was predicted by all four lifestyle variables, namely innovativeness, ethnic conscious, traditional family and fashion conservative, and two demographic variables, namely gender and ethnicity. Religious affiliation and religiosity were not significantly related to shopping enjoyment. Fashion conscious orientation was predicted by two lifestyle variables, (innovativeness and fashion conservative) and four demographic variables (education, age, marital status and ethnicity). All other variables, including religious variables, did not have any significant impact on fashion conscious.

On quality conscious, significant predictor variables were interpersonal religiosity, innovativeness, age, income and intrapersonal religiosity. These variables, except for age, had positive signs. Impulsive shopping was predicted by intrapersonal religiosity, innovativeness and interpersonal religiosity. Both religiosity variables had negative signs and innovativeness had a positive sign. On price conscious orientation, significant variables that entered the final regression equation were interpersonal

religiosity, innovativeness, intrapersonal religiosity, income and gender. Both religiosity variables had positive signs.

Overall, all three sets of personal characteristic variables appear to affect shopping orientation factors. Of four lifestyle variables, innovativeness appears to be most significant in predicting shopping orientations. Its effect was present in all six shopping orientation factors. The findings also suggest that certain shopping orientation constructs are more closely linked with the degree of religiosity than other shopping orientation constructs. Specifically, three shopping orientation factors, namely quality conscious, impulsive shopping and price conscious were found to be significantly influenced by intrapersonal and interpersonal religiosity. Religious affiliation had no significant impact on any shopping orientation factors; this is consistent with criticisms of the efficacy of religious affiliation as a predictor of consumer behaviour (McDaniel and Burnett 1990).

A series of four stepwise multiple regression analyses was run with four store attributes (merchandise, reputation, attractiveness and price) as criterion variables and with personal characteristics as predictor variables. All four store attributes were broadly predicted by personal characteristics with the adjusted R^2 s ranged from 0.093 to 0.263 at a 0.001 significance level. The significant variables in predicting merchandise were the two lifestyle variables, namely innovativeness and ethnic conscious, and the two religiosity variables, namely intrapersonal religiosity and interpersonal religiosity. All four variables had positive signs. On reputation, significant predictor variables were interpersonal religiosity, religious affiliation, gender and innovativeness. On store attractiveness, the regression results showed that both religiosity variables (intrapersonal and interpersonal religiosity) and one lifestyle

variable (innovativeness) were the significant predictors. Both religiosity variables had negative signs. No significant impact of demographic variables was indicated. On price attribute, significant predictor variables were intrapersonal religiosity, age, religious affiliation, gender, income and interpersonal religiosity. Lifestyle variables had no significant influence on price attribute.

Overall, among all the personal characteristic variables, the degree of religiosity was found in all cases related to the store attributes examined. Demographic variables appeared to be less significant in predicting store attributes. For instance, age, gender and income had influence on price while gender was the only variable related to reputation. Other demographic variables such as marital status, ethnicity, work status and education did not appear as influential factors to any of the store attributes. The weak findings related to demographics are consistent with Gehrt and Yan (2004) who found that the efficacy of demographic variables in predicting importance of store attributes is somewhat limited.

In the final part of analysis, personal characteristics were entered into the regression model to predict the frequency of store patronage. Although the models were statistically highly significant, the variances explained by personal characteristics were very small, ranging from 0.051 to 0.175. These results suggest that the ability of personal characteristics to predict store patronage was minimal. Hypermarket was predicted by two lifestyle factors of traditional family and innovativeness. Department store and specialty store were predicted by a single predictor – innovativeness. Items contributing significantly to specialty department store patronage were demographics of ethnic, age and marital status and two lifestyle factors of ethnic conscious and innovativeness. Catalogue was associated with two

demographic characteristics of gender and education. Both religious affiliation and religiosity, the personal characteristics of primary interest, has no significant explanatory power and uncorrelated with any of the store patronage items.

Considering the data analysis results, the following observations are drawn:

1. Religious affiliation, after controlling for the effect of other predictor variables, has an influence on importance of store attributes dealing with reputation and price.
2. Intrapersonal religiosity, after controlling for the effects of other predictor variables, has an influence on information source (media), shopping orientation (quality conscious, impulsive shopping and price conscious) and importance of store attributes (merchandise, attractiveness and price).
3. Intrapersonal religiosity is the strongest predictor of store attribute dealing with price relative to other variables.
4. Interpersonal religiosity, when controlling for the effects of other predictor variables, has an influence on information source (both media and personal), shopping orientation (quality conscious, impulsive shopping and price conscious) and importance of store attributes (merchandise, reputation, attractiveness and price).
5. Interpersonal religiosity is the strongest predictor of personal source, quality conscious, price conscious and store attributes dealing with reputation and attractiveness relative to other personal characteristic variables.
6. Religiosity appears to be a good predictor of consumer behaviour compared to religious affiliation.

9.2.3.1 Coefficient of Multiple Determination (R^2)

Table 9.2 presents the coefficient of multiple determination (R^2) obtained from the regression analysis. It was observed that the R^2 for some regression equations were relatively low. While we need to focus more attention upon the significance of the hypothesized relationships rather than the overall explanatory power of the independent variables (Duncan 1995, p. 65), it is also important for us to understand the underlying factors that contribute to the low variance accounted for by the independent variables in order to validate the statistical results.

Table 9.2 Coefficient of multiple determination (R^2)

Criterion	Predictor	R^2	Adj. R^2
Information source	Media	0.267	0.254
	Personal	0.131	0.119
Shopping orientation	Brand conscious	0.233	0.222
	Shopping enjoyment	0.273	0.253
	Fashion conscious	0.450	0.435
	Quality conscious	0.193	0.174
	Impulsive shopping	0.091	0.079
	Price conscious	0.181	0.163
Store attributes	Merchandise	0.142	0.126
	Reputation	0.156	0.141
	Attractiveness	0.105	0.093
	Price	0.282	0.263
Store patronage	Hypermarket	0.060	0.051
	Department	0.086	0.082
	Specialty department	0.193	0.175
	Specialty	0.071	0.067
	Catalogue	0.099	0.091

The R^2 is a measure of the amount (proportion or percentage) of variation in one variable explained by variation in the other variables, and it ranges in value from 0 to 1. The closer R^2 is to 1, the better the fit of the model. Thus the R^2 can be taken as a measure of the predictive ability of the regression model or the strength of the straight-line relationship (Zar 1999). Despite its usefulness, however, statistical methodologists (Reisinger 1997; Uncles and Page 1998; Studenmund 2001; Lattin, Carroll and Green 2003) argued that it is difficult to determine when the R^2 is high or low since its numerical value is no absolute indicator of goodness-of-fit, rather, it is just a measure of explained variance relative to total variance in the dependent variable. Lattin et al. (2003), in their discussion on the application of regression analysis, state that “there are no absolute standards for what constitutes an acceptable fit” (p. 53). Similarly, according to Studenmund (2001), “there is no simple method of determining how high R^2 must be considered satisfactory. Instead, knowing when R^2 is relatively large or small is a matter of experience” (p. 49). At one extreme, some researchers contend that a very high R^2 is essential if our predictions are to be accurate (Hair et al. 1998). At the other extreme, some feel that the validation of a model on the basis of the R^2 should be done with the proper degree of caution. As persuasively described by Lehmann, Gupta and Steckel (1998), “low R^2 means that individuals predictions cannot be made accurately, not that the results are worthless. In fact, when using survey data, R^2 above 0.6 usually mean that either the equation is essentially tautology or that the data were incorrectly analysed” (p. 499).

Nevertheless, the existing implicit guideline suggests that one should consider as ‘successful’ regressions based on cross-sectional data that have an R^2 approaching 0.3 with a core of statistically significant exploratory variables (Moscardelli and

Liston-Heyes 2002). Lewis (1985) on the other hand, opined that, in behavioural statistics, an R^2 value of between 0.5 and 0.6 is considered as acceptable. A more systematic guideline has been provided by Cohen (1988, p. 79-81) who categorised R^2 values of 0.01, 0.09 and 0.25 in regression analysis as having small, medium and large effect size respectively. As presented in Table 9.1, the best regression equation “explains” approximately 43% of the variance in fashion conscious orientation and the poorest equation involves hypermarket for which the predictors account for only 5.1% of the variance. According to Cohen (1988), these effect sizes can be classified as small to large.

The low R^2 values obtained for some regression equations in this study deserve closer attention. A low R^2 value indicates that the proportion of the variation in the dependent variable that is explained by the variation in the independent variable is low. Theoretically, it may mean that the independent variables considered in the regression equations may not be representative predictors as they leave a relatively large portion of the variation in each criterion unexplained (Hair et al. 1998). For instance, the adjusted R^2 between personal characteristics and impulsive shopping orientation was 0.079, meaning that the predictor variables (personal characteristics) were able to explain for only 7.9% of the variation in the dependent variable (impulsive shopping), leaving 92.1% of the variation unexplained. This result could be interpreted as suggesting that there may be other predictor variables beside those included in the regression model that could significantly influence, either directly or indirectly, the criterion variables. Such predictors, among others, may be life experience, psychological states, personality and self concept. It should be of concern

for future research to identify and explore the influence of more diverse variables on aspects of retail patronage behaviour.

Low R^2 values might be expected in this study because the researcher included only a small number of many possible predictors of consumer behaviour. The fact that low R^2 values are rather common in consumer behaviour studies that explore a limited number of variables (Peterson, Albaum and Beltramini 1985) and some of the reasons for this are well documented. In time-series, for example, where the environment is quite stable, R^2 s are routinely as high as 0.9, whereas in changing environments, R^2 s may fall to 0.2. A difference is also seen between regression models where the aim is to predict aggregate measures (sales, market shares, etc.) and those where it is to predict individual behaviour or attitudes – the latter model being prone to low values of R^2 (Uncles and Page 1998).

A recent empirical study by Reisinger (1997) provides an interesting and adequate explanation of why R^2 values obtained in marketing research are relatively low. In his study, the researcher analysed 105 regression models using OLS estimation from 44 marketing studies published in the *Journal of Marketing Research* (volumes 1992-94), the *International Journal of Research in Marketing* (volumes 1989-94) and *Marketing Letters* (volumes 1989-94) with an objective to identify various influences on the coefficient of determination (R^2) which originate in the research designs of empirical studies. Among the explanatory variables investigated in his meta-analysis were the data type (time-series data, cross-sectional data or pooled data), data collection method (primary or secondary) and sample size. Based on his meta-analysis, the researcher arrived at a number of interesting conclusions and these are described in the following paragraphs.

First, R^2 values are relatively lower in cross-sectional analyses than in time-series analyses. The main reason for this phenomenon is that within a cross-section consisting of a number of different (i.e. heterogeneous) objects of investigation, the proportion of variance that cannot be explained is usually higher than with time-series data where only one object of investigation is studied over a given time period. In addition to this, time-series data in marketing research are often measured at an aggregate level (e.g. population) whereas cross-sectional data can be available at the same level of aggregate but often involve data at a lower level (e.g. households). An important consequence of aggregation is that some variation cannot be explained is usually averaged out, resulting in high R^2 values. Therefore, another contributing factor to the difference in R^2 between time-series and cross-sectional data could be the different aggregation level of the two types of data (Reisinger 1997).

Second, R^2 values are lower in studies with primary data than studies with secondary data. This phenomenon occurs primarily because of the high correlation between the use of primary data and the performance of a cross-sectional study. Reisinger (1997) argued that aggregation could be a contributing factor to the difference between primary and secondary data, as secondary data may be measured at a higher aggregation level.

Third, R^2 values are positively related to the number of regressors. For a given sample size n the R^2 value will increase by adding more regressors into the linear model. The R^2 value may therefore be high even if possibly irrelevant regressors are included. Based on his empirical findings, Reisinger (1997) concluded that the larger the number of regressors in a study, the higher is R^2 value.

Fourth, values of R^2 are negatively related to sample size. As the sample size becomes larger, the unadjusted R^2 tends to decrease and vice versa. The main reason provided for this phenomenon is based on the difference between the adjusted and unadjusted coefficient of determination. The adjusted R^2 (which accounts for degrees of freedom) is an approximately unbiased estimator of the R^2 in a population whereas the unadjusted R^2 is biased upward (it overstates true explanatory power). According to Reisinger (1997), the size of the upward bias depends primarily on the sample size and secondarily on the number of independent variables included in the regression model. Thus, when holding the number of independent variables constant, the larger the sample size, the smaller the difference between adjusted and unadjusted R^2 .

From Reisinger's (1997) findings, it seems clear that low R^2 values in marketing studies can be explained by a number of qualitative and quantitative factors. This is also the case of the present study, in that the linear regression analysis was based on primary, non-aggregated cross-sectional data and large sample size (over 200) which have contributed to low R^2 values. In fact, it is not uncommon in consumer behaviour studies to obtain low R^2 values when using regression analysis, as briefly reviewed in the following paragraphs.

Shim and Kotsiopoulos (1992a, 1992b), in their two-part study of retail patronage behaviour of apparel shopping among female consumers, use multiple linear regressions to investigate the relationships among patronage behaviour, store attributes, shopping orientations, information sources and personal characteristics. In their first part of study, they obtained R^2 values ranging from 0.01 to 0.2 for the regression equations estimated. They developed patronage profiles for discount store, specialty store, department store and catalogue shopping based on the results obtained.

In their second part of study, which investigates the influences of non-antecedent variables on patronage behaviour and store attributes, they reported R^2 values ranging from 0.02 to 0.36. In their defense of the low R^2 values obtained in their study, they argued that there are other important variables not been included in the regression equation which can explain the dependent variable.

Clark (1992) investigated the relationship between certain religiosity variables and the importance placed by an individual on retail store evaluative criteria dealing with sales personnel friendliness/helpfulness. Three independent variables namely orthodoxy in religious beliefs, fundamentalism and cognitive religiosity were found significant in predicting sales personnel friendliness/ helpfulness, with R^2 values of 0.028, 0.04 and 0.063 respectively.

Jasper and Lan (1992) examined the relative importance of consumers' lifestyle, demographic and motivational factors in catalogue shopping patronage. The data indicated a relationship between consumers who shop for apparel from catalogues and some of the variables included – age, education, sport activity, inactive activity and convenience. Although the models were statistically significant, the R^2 values were low, ranging from 0.0385 to 0.097.

Eastlick and Feinberg (1999) examined the role of motives in influencing preferences for catalogue shopping. They obtained R^2 of 0.065 and 0.032 for functional and non-functional motives in predicting consumers' annual catalogue expenditures for clothing and sporting goods products respectively.

In a more recent study, Jin and Kim (2001) examined the effects of consumers' internal shopping motives and external store attributes on excitement that shoppers may experience at discount stores in Korean markets and the mediating

impact of excitement on selected behaviour outcomes. All regression models in their study were significant; however, the R^2 values obtained were small, ranging from 0.01 to 0.24.

On the basis of the above discussion, several points are to be highlighted in relation to the present study:

1. A small amount of variation in the regression equation, as indicated by the low R^2 values, is accounted for by the presence of relatively few independent variables, whereas retail patronage variables (information sources, shopping orientation, store attribute importance and store patronage) may be affected by a large number of variables within the context of the general conceptual framework of consumer behaviour.
2. Although the regression equations showed low R^2 values, the model achieved a statistically significant overall level of goodness-of-fit ($p < 0.001$) as measured by the F-statistics, indicating a meaningful relationship.
3. Using Cohen's (1988) classification system of effect size, the regression equations in the present study can be classified as small to large explanatory power since the R^2 values are in the range of 0.051 to 0.435.
4. Low R^2 s in the marketing literature arise due to a number of factors including the type of data, method of data collection and sample size (Reisinger 1997). In the current study, the analysis was cross-sectional, primary data was used and the sample size was large (over 200), all of which have been contributed to a relatively low R^2 values.

5. A brief review of several selected studies in the consumer behaviour literature indicated that low R^2 values are commonly reported by studies in this area using linear regression analysis.

9.3 Theoretical Model Revisited

This section presents the revised theoretical model based on this study's findings. Throughout the analysis, all of the dependent variables, with the exception of store patronage, were found to be significantly associated either to intrapersonal religiosity or interpersonal religiosity, or to both. The same patterns were observed for lifestyle factors. All of the dependent variables were found to be correlated to at least one lifestyle factor. The effect of religious affiliation was found to be significant on lifestyle and store attributes while the effect of demographic variables appears to be limited to only certain factors of the dependent variables.

Looking at the results of this study as a whole, one can make general observation that religiosity is somewhat a better predictor than religious affiliation and demographics and about equal to lifestyle. On the overall basis, the proposed model was moderately supported. Based on all results, the linkages among variables in the proposed model were revised to reflect the findings from this present study.

The revised version of the theoretical model is shown in Figure 9.1. The uniqueness of this model is that it includes religious variables not considered in other retail patronage models. It is to be noted that the demographic variables were omitted from the model to simplify the visualisation of relationships among variables of particular interest. Solid lines with arrows represent relationships that were tested and

supported by this study while dotted lines represent relationships suggested in the current literature but not tested by this study.

The causal process represented by the model is posited to function as follows. There are two exogenous variables: religious affiliation and religiosity. These variables are posited to influence endogenous variables in the model, which include lifestyle, information source, shopping orientation and store attributes and store patronage. The consumer's lifestyle shaped by one's religious identity and religiosity plays a determinant role with respect to several subsequent variables.

The upper portion of the model presents the direct influence of religiosity on the following constructs: lifestyle, information sources, shopping orientation and store attribute importance. An unexpected finding was the absence of a link between religiosity and store patronage. Neither intrapersonal religiosity nor interpersonal religiosity was significantly related to store patronage. Hence, this path was eliminated in Figure 9.1. This insignificant correlation could be interpreted as suggesting that religiosity, if it has any effect at all, has more of an indirect effect on store patronage by more directly influencing other constructs (e.g. store attributes) which in turn influence store patronage.

The study's findings related to religious affiliation is depicted by the lower portion of the model. Based on the results, religious affiliation is posited to affect lifestyle and store attributes. Although religious affiliation does not appear to have a significant relationship with the other three constructs, the possibility of indirect relationships may exist. Considering the significant effect of religious affiliation on both lifestyle and store attributes, it is suggested that religious affiliation may have an indirect effect on both information source and shopping orientation through its direct

effect on lifestyle. In the same vein, religious affiliation may be indirectly affecting store patronage through its direct effect on both lifestyle and store attributes. Further research may help corroborate these relationships.

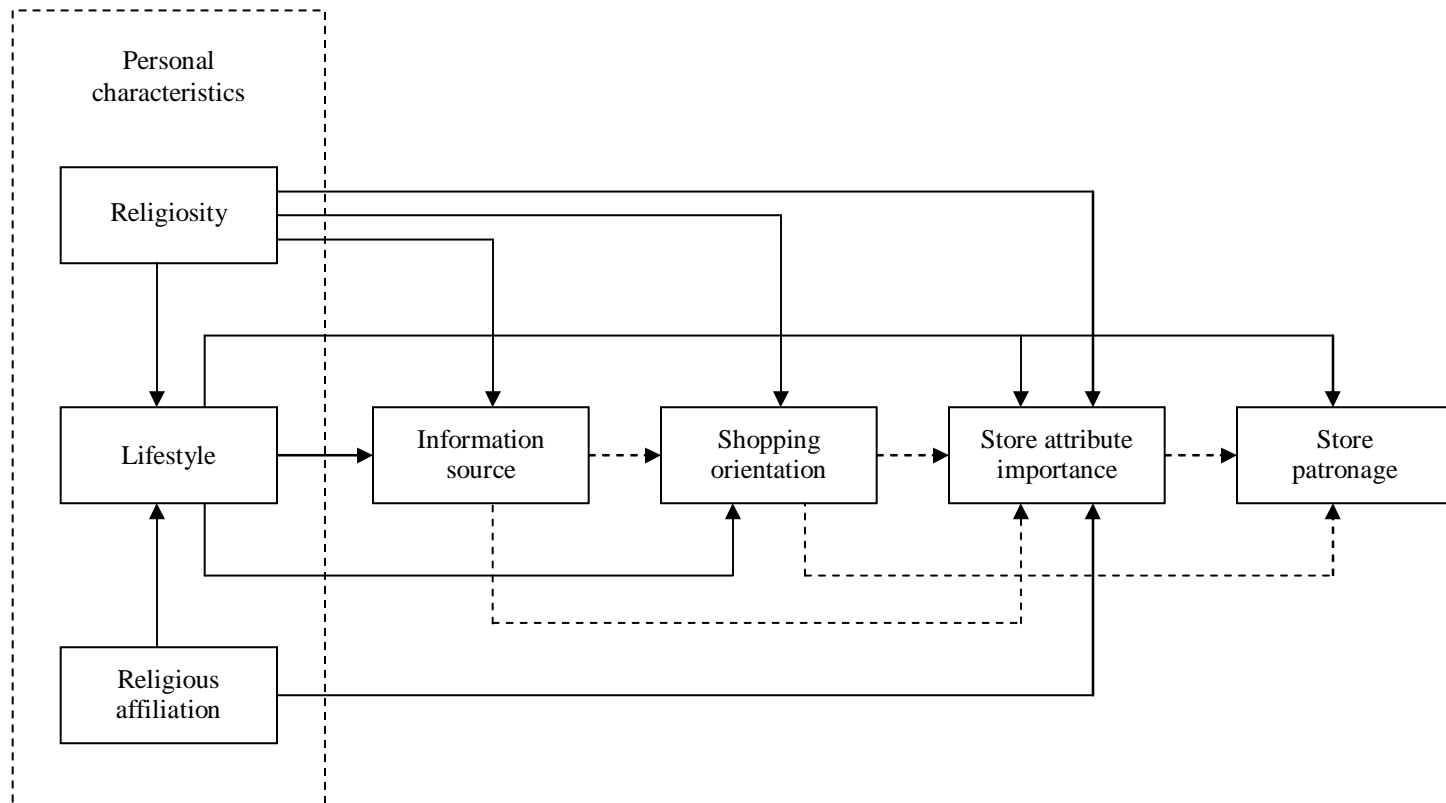


Figure 9.1 A revised model of retail patronage behaviour

9.4 Contribution to the Literature

The construct of culture and subculture have become increasingly central to the consumer behaviour literature. Previous studies in the area of culture and formation of consumption (e.g. Schouten and McAlexander 1995; Chung 1998; Shaw and Clarke 1998; Thompson and Tambyah 1998) have generally identified cultural values as important factors in determining the consumption behaviour of individuals. Notwithstanding the growing body of extent literature focused on this topic, culture has been considered by researchers to be the most difficult construct to investigate because of its pervasive nature (McCort and Malhotra 1993). Culture has been defined variously as values, norms, rituals, beliefs and symbols shared by members of a group or society. It includes patterns of behaviour, learned responses, basic assumptions, habits and traditional ways of thinking, feeling and reacting (Shweder 1991). The very complex and abstract nature of culture makes it certainly beyond the bound of possibility for any empirical research to adequately study culture as one unified concept. This has led to the call to “unpackage” culture in order to understand the underlying dimensions of cultural influences and the behavioural consequences of them (McCort and Malhotra 1993, p. 92).

There is a considerable body of extant literature focused on culture and its influence on various aspects of consumer behaviours. However, among this body of work, there are limited examples of research that incorporate the role of religion as an element of culture with consumer behaviour. Instead, researchers have mainly focused on other subcultural factors such as ethnicity (Herbig and Yelkur 1998; Kim and Kang 2001; Lee, Fairhurst and Dillard 2002; Rajagopalan and Heitmeyer 2005), nationality (Moss and Vinten 2001) and values (Grunert and Juhl 1995; Slowikowski and Jarratt

1997; Gregory, Munch and Peterson 2002) as important predictors of certain consumer behaviours.

Religion is an important cultural factor to study because it is one of the most universal and influential social institutions that has significant influence on people's attitudes, values and behaviours at both the individual and societal levels. Whether working directly through taboos and obligation or through its influence on the culture and society, religious values and beliefs are known to affect ritualistically and symbolically human behaviour. Religion and its associated practices often plays a pivotal role in influencing many of the important life transitions that people experience (e.g. births, marriages and funeral rites), in values that come to be important to them (e.g. moral values of right and wrong), in shaping public opinion on social issues (e.g. cohabitation, premarital sex, family planning, death penalty, organ donation, abortion, and the like), in what is allowed and forbidden for consumption (e.g. restriction on eating and drinking) and in many other aspects that pertain to everyday life. These norms however vary between different religious faiths and the degree of observance determine to what extent these norms are kept.

Still, observant believers are not the only ones who tend to reconcile their religious beliefs with their behaviours. Religious requirements and regulations often take on an extended meaning beyond observant believers. For instance, dietary laws represent an obligation for observant families and at the same time, a sort of habit or preference for non-observant members of the community. Here, religion refers to, not only a belief binding the spiritual nature of man to a supernatural being, but mainly a sub-system of culture that determine customs and norms of the society. This system is

supposed to influence believers' conducts as a sign of reverence or faith and those of agnostics and atheists, as a pillar of cultural environment.

Even though social beings' behaviours and attitudes are directly influenced by at least religion-rooted cultural aspects of their living environments, religion's impact on consumption-related behaviour have been only very modestly studied in the marketing literature. While past research on this topic has been sparse and fairly a theoretical in nature, the existing literature collectively suggests evidence that one's religious background is an important construct to the study of consumer behaviour. The impact of religion on consumer behaviour depends on the religion itself and on the extent to which individuals follow the teachings of their religion.

Only a limited consumer research on religion, however, has extended beyond consumption and choice behaviour into the domain of retail patronage behaviour. Even in those instances in which religion and religious values have been empirically examined in a retail patronage context (e.g. McDaniel and Burnett 1990; Clark 1992), the research effort has been somewhat narrowly defined in terms of the relationships examined. For example, McDaniel and Burnett (1990) examined only the link between consumer religiosity and retail store evaluative criteria. Till recently no effort has been made to examine the influence of religious background on retail store patronage behaviour in an integrated framework.

The present study was undertaken with the intent to contribute to the current literature on consumer behaviour by concurrently investigating the effects of two religious variables (religious affiliation as well as religiosity) on retail patronage behaviour. Many of the preliminary findings reported here support the general nature of our already established understanding and intuition regarding religion-consumer

behaviour relationship. In addition, these findings potentially make a couple of important theoretical contributions to the accumulating theories on consumer behaviour, as discussed in the following paragraphs.

First, this study was designed in part to contribute to the process of model building in consumer behaviour research. Based upon review of previous relevant studies on consumer behaviour, a model of religious influences on retail patronage was developed and tested with survey data. Though not all of the possible causal linkages of the proposed model were empirically tested, the results were generally supportive of the study's hypothesis that religious background of the consumers plays a significant role in affecting certain aspects of retail patronage behaviours. The revised model is shown in Figure 9.1. This model can be used as a point of departure for future researchers to develop a better understanding of the linkages among important constructs and may be employed as a conceptual background to study the religious influences on retail patronage behaviour. It is also possible for a researcher to test this model in a single study.

The results of this study are valuable because links between religious construct and some important aspects of retail patronage behaviour are demonstrated (see Figure 9.1 for the revised version of the model). In the retailing literature, it has been established that consumers' retail patronage activities are influenced by a variety of personal traits and demographic indicants including personal values, lifestyle, employment, family life cycle, social class, sex, education attainment, marital status, age and income (Darden 1980; Shim and Kotsiopoulos 1992a). Religion, while being recognised as a subset of consumers' personal traits (Sheth 1983), has received relatively scant attention within consumer behaviour research. Consequently, little is

currently known about how this subcultural variable may impact on both functional and non-functional aspects of consumer behaviour in a retail patronage context. The present study possess some intrinsic theoretical worth in that it enhances our understanding of the role of religion as a cultural-based predictor of consumer behaviour in a retail patronage context, and in particular, lend empirical support to Sheth's (1983) Shopping Preference Theory. Understanding culturally-driven behaviours, as manifested or as influenced by religious identity and commitment, can assist researchers in developing culturally-appropriate instruments to better understand the theoretical premise of religious consumer behaviour.

The present study has provided some new information that adds to our current limited stock of knowledge concerning the influence of religion on consumers' retail patronage behaviour. Evidently, religion does have an effect on reported behaviours with the degree of religiosity was found to be more important than belonging to any particular religious faiths. This is among major contribution of this study as until now the existing literature on this subject, while supporting for the inclusion of religious variable as a reliable and valid predictor in consumer research, provide little consensus agreement on which measure (whether categorical measure of religious denomination or multidimensional measure of religiosity) is the most efficient in explaining variation in aspects of consumer behaviour. It appears that the differences between consumer behaviour in general were much more overt for religiosity than merely for religious affiliation. This implies that religiosity may serve as a potentially powerful predictor and determinant of major consumer behaviours in such areas as information source, shopping orientation and importance of store attributes. Thus, religiosity of the consumer rather than religious affiliation should be given more

researcher attention in the study of retail patronage and perhaps other areas of consumer behaviour.

Another theoretical contribution of this research is the identification of religiosity dimensions. While there is no consensus in the literature regarding the exact number of religiosity dimensions, most researchers agree that religiosity is a multi-dimensional construct that necessitates its components to be studied individually. Thus, in keeping with the injunction to measure religiosity in a multi-dimensional manner (Wilkes et al. 1986), the study utilised a multi-item scale covering cognitive and behavioral aspects of religiosity in order to obtain a clear picture of how religious the subject really are. As the result of factor analysis have confirmed, religiosity could be represented by two religious dimensions namely intrapersonal religiosity and interpersonal religiosity, with the former mainly represents the cognitive dimension while the latter mainly represents the behavioural dimension of religious commitment. The dimensionality of religiosity found in this study lends support for Worthington et al.'s (2003) conceptualisation. The researcher belief that these two religious dimensions are particularly important in consumer research since many explanations of consumer decision-making process revolves around the concept of cognitive and behaviour (Schiffman and Kanuk 1991; Loudon and Dilla-Bitta 1993; Engel et al. 1995; Mowen and Minor 1998; Hawkins et al. 2001; Solomon 2002; Arnould et al. 2004). The finding of the current study further demonstrated that these two religious dimensions have differential effects on certain aspect of consumer behaviour. For instance, consumers' uses of information from media sources were influenced by intrapersonal religiosity (cognitive dimension) while consumers' uses of information from personal sources were influenced by

interpersonal religiosity (behavioural dimension). The implication is that, in order to obtain more elaborate finding, future research effort should explore the effects of religiosity from these two perspectives rather than treating religiosity as one composite dimension.

In addition, the thesis is unique because of the relative newness of the religiosity measure in which the study was utilised. While no researcher thus far has adapted the RCI-10 inventory as measurement device for religiosity construct, the use of this inventory in the current research has proved to be a reliable measure since a high alpha coefficient of 0.85 was obtained for the scale. The reliability tests performed on the two components of the scale, intrapersonal religiosity and interpersonal religiosity, also showed a high degree of internal consistency with alpha coefficients of 0.85 and 0.68 respectively. The high alpha values for both scales confirmed prior reliability tests of the scale (Worthington et al. 2003). Although a higher alpha level would be preferred for interpersonal religiosity, the researcher believes, overall, the scale is generally acceptable for an initial research effort. In the current study, this scale was used to measure the degree of religiosity of four different religious groups which had not previously been measured using this scale. Thus, experience from this study would indicate that those who seeking a short religiosity scale for use in survey research involving non-Judeo Christian respondents, particularly in the non-Western culture, should probably consider the RCI-10 inventory. Moreover, apart from the fact that this scale is neutral (i.e. free from bias towards specific tenet of any religious faiths), from the methodological perspective, a shorter version of the religiosity scale but at the same time maintaining excellent psychometric support would save time in research protocol by cutting the number of

items nearly in half (e.g. as compared to 20-item Religious Orientation Scale developed by Allport and Ross). More importantly, a shorter version of religiosity scale may be preferable and even practical because it is sometimes difficult in getting the participation of religious respondents due to the sensitive nature of the topic being researched (Khraim et al. 1999).

Another significant contribution of this study lies on its focus on clothing as a shopping product. As noted earlier, past studies on the relationship between religiosity and consumer behaviour have been very limited to the choice of expensive, high involvement items such as automobile and microwave oven (Delener 1989, 1990a, 1990b, 1994), radio (Bailey and Sood 1993; Rodriguez 1993; Sood and Nasu 1995) and television set (Essoo and Dibb 2004). Such items require substantial financial outlays therefore could only be afforded by some consumers. This study differs from all the previous ones in that the purchase of clothing was used as a shopping scenario in examining the religious influences on consumers' retail patronage behaviour. While the conclusions drawn from this study certainly may not apply to shopping for other product class, the results add an extra dimension to the current body of knowledge by providing evidence that the impact of religion on consumer behavioural orientations is not restricted only to the purchase of expensive and high involvement products but also to include clothing which represents the value-expressive and high purchase-frequency product class. The implication is that even with a purchasing decision of this kind of product, consumers' religious background apparently influence upon their behaviour. That such differences exist for clothing seems to imply that there would be other, maybe even more marked differences for other, either sensitive or less sensitive,

durable products. This finding is important for theory building in this and other marketing and consumer contexts.

Finally, the findings reported in this thesis provide empirical evidence concerning religion's influence on consumer behaviour in a non-Western culture. A review of relevant literature showed that the majority of past studies addressing the linkage between these two constructs have been typically conducted with Western Judeo-Christian cultures where Jews, Protestants and Catholics are predominant in its society; other countries with different socio-cultural milieus are underrepresented in research investigating this issue. As such, these studies provide limited supports on the generalisability of the research findings. This study contributes to the current literature as the first piece of empirical endeavour to probe the relationship between religion and consumer behaviour in a totally different cultural framework – Malaysia. To the researcher's knowledge, there has been no report to date (or not that the researcher was aware of) of empirical study that explored the influence of religion on consumer behaviour in the context of Malaysian culture. The present research may lead international consumer researchers to a better understanding of the relevancy of religion and degree of religiosity on consumer behaviour across different cultural settings, especially in those where the four world's major religions namely Islam, Buddhism, Hinduism and Christianity, reflect the multi-character of the population.

9.5 Managerial Implications

A fundamental problem facing many marketers operating within a multicultural consumer society such as Malaysia is how to target efficiently and meet the needs of their diverse target markets. Because the market comprises a significant number of

culturally diverse consumers, the markets cannot be deemed as homogeneous and marketers naturally have to find ways to approach these consumers. Though marketers can use a standardisation marketing approach by focusing on common basic needs for all consumers; this approach seems to underestimate the profound influence of cultural differences among consumers on their purchasing behaviours.

This thesis examined a case where religion as an element of culture may be a useful conceptual vehicle for interpreting consumer behaviour. The findings of this investigation as well as past research (Bailey and Sood 1993; Sood and Nasu 1995; Essoo and Dibb 2004) suggest that consumers' behaviour vary significantly depending on their religious beliefs and commitment. Thus marketing strategists who wish to understand consumers in a more predictive and comprehensive manner might benefit from considering religion as a predictor of consumer behaviour rather than simply as correlates of item purchasing. Several practical implications of potential significance for marketing are discussed below.

At the strategic level, insights into religious differences in consumer behaviours can provide a means for developing market segmentation strategies. The most obvious consideration is the selection of a segmentation basis – whether to use religious affiliation or religiosity. The findings of this study indicate that religious or ideological label matters less than the extent to which people are committed to their religious beliefs and practices. Thus, attempts to formulate marketing strategies using religious affiliations would not prove to be fruitful and even may fail to explain the differences in behaviour resulting from intensity of adherence to religious principles and value systems. Therefore it will be helpful to the effectiveness of the marketing strategies when religiosity variables are considered.

Since differences based on religious values were found to be significant in predicting certain behavioural orientations such as lifestyles, information usage, shopping and the importance attached on store attributes, it follows that knowledge of the religiosity of consumers can provide the marketers with a very practical tool for market segmentation. Once the markets are segmented based on religiosity, marketing tactics may then be designed which reflect and are better suited to the characteristics of consumer behaviour (Essoo and Dibb 2004).

At the store level, they may value in using consumer religiosity as a tool for achieving greater effectiveness in retail strategies. Consumers with different levels of religiosity were found to attach different amounts of importance to store attributes. These findings would indicate distinct differences in the pricing, distribution, promotion and communication elements of the marketing programmes for the devout and casually religious target markets. The existing marketing programmes will probably have to be adjusted to account for these differences.

Understanding that consumers with varying degrees of perceived religiosity tend to differ in their evaluations of certain store attributes can be very useful not only in determining the appropriate image for a retail store but also in designing an overall retail marketing strategy based on that image. Consequently, retailers may wish to assess the religiosity of their local community. For example, the higher the religiosity of the local trade area, the more likely the community residents are to attach higher preference for retail stores with excellent reputation, merchandise mix and acceptable price level. Retailers that offer and promote these attributes should have a competitive advantage over those retailers that do not.

The findings that certain store attributes were considered more important by religious consumers indicates opportunities for retailers to utilize these attributes as attractions in targeting this segment. Highly religiously consumers can be characterised as utilitarian-oriented shoppers (high in price and quality consciousness) and were found to attach greater amount of importance to reputation of the store, merchandise and price attributes. To attract this segment, retailers are recommended to emphasize on price and high quality appeals in their promotional strategies in conjunction with offering attributes valued by religious consumers.

Product planning, distribution and pricing could be affected by the religious construct; however, marketing communications could be affected most seriously. By knowing the preferences of large market segments, marketing strategies would be better able to develop communication strategies that would reach and enhance importance values of consumers. Also such knowledge should serve as a guide to development of more suitable message content and appeals. Consumers possessing high religiosity are actively engage in information-searching behaviour to a greater extent than do low religious consumers. The primary implication for marketers is that a large amount of promotional material should be aimed at those segments that look for such information.

To elicit positive emotional response, communication message should be tailored according to religious values that are relevant to the target audience. Religious individuals may receive information through predictable media, may prefer it be delivered by more religious individuals and insist that it be devoid of profanity, sexually-explicit scenes, etc. that contradict his/her religious beliefs. Thus extreme care should be taken in the type of message conveyed in the advertising. Fam et al.

(2004) suggest that conservative attitudes and lifestyles should be stressed. In fact, advertising that implies nontraditional moral codes or breaks with conservative lifestyles will probably not be effective with the religious segments. This is especially the case for socially sensitive products (such as male and female undergarments). In Malaysia, the advertising of gender related products is prohibited in mass media but not to specialist magazines. This reinforces the importance of targeting religious consumers with the right media vehicles and modest advertising content.

In section 9.6 below, the researcher discusses the limitations of the current work that need to be taken into account when assessing the findings and its implications. The researcher then goes on to suggest ways in which this research could be extended in subsequent studies.

9.6 Limitations of the Study

While every effort was made to ensure that the conceptual and methodological aspects of this study were precise as possible, as with any empirical study, the present work also had certain constraints that need to be taken into account when assessing the outcomes of its findings and implications. The potential limitations of this study are discussed below to clearly establish the boundaries, rather than to negate the findings of this study and serve to identify avenues for subsequent studies in this area.

Firstly, since the current study is of a cross-sectional nature and since no experimental research was conducted, no definite conclusions can be drawn concerning the causality of the relationships in the results. Thus, in considering the findings, one should recognise the exploratory nature of this study in that it attempts to discover associations between religion and some aspects of consumer behaviour. It

is also correlation (associative) and not causal in nature and is intended to build upon the existing work in this field. Against this background, the identified relationships should be interpreted as possible relationships or preliminary evidence rather than as a conclusive demonstration that such causal relationships exist. More theory-driven studies are warranted to provide consistent evidence for verification of the linkages and continue this stream of research in order to achieve a fair understanding of variation in consumer behaviour in different religious cultures.

As with any cross-sectional study, the data presented are useful in falsifying relationships in the model. However, cross-sectional data analysis cannot confirm the direction of causality implied in the research model, so it is necessary to be cautious in conclusions regarding causality. In addition, any survey-based method, including that adopted in this study, involves measurement error. For example, the elicitation of a scale measurement depends on the respondent's ability to accurately report their level of agreement with the survey statements. Nonetheless, the good scale reliability coefficients reported (Cronbach's alpha coefficient in most cases higher than 0.6) indicate that the error terms in this study were minimised and thus can be considered a reasonable construct for research purpose (Cohen and Cohen 1983, p. 412).

It is also important to recognise the inherent limitation associated with generalizing the findings beyond the sample utilised and its geographical scope. The sample for this study was limited to the municipal area of Kuala Lumpur and the distribution of the sample on the select demographic characteristics does not necessarily follow the characteristics of the general population of Malaysia. It is possible that the behaviour patterns of consumers in other economic-social-political environments could well differ from those uncovered in this study. Thus there is a

limitation in generalizing the findings of this research to the Malaysian population as a whole and to other less or more developed countries.

Due to the constraints of time and financial resources, the sample size in this study was relatively small compared to previous similar studies. Thus weakness inherent in a small sample size such as instability of measures and the consequent reduction in the power of statistical tests in the data analysis may have attenuated the results of this study. A larger and equal sample size would have been more useful to assess the stability and dependability of the findings. However, “if statistical tests are significant, one can consider the sample size as adequate” (Herche and Balasubramanian (1994, p. 71). Despite the shortcoming in sample size, this study has been able to demonstrate that the sampled consumers’ religious background has impacted their retail patronage behaviour to some degree, though the latter is likely to be influenced by many other relevant and/or pertinent factors as well. Furthermore, given the exploratory nature of this study, the sample size included is thought to be reasonably acceptable for drawing preliminary conclusions about the impact of religion on consumer behaviour in Malaysia.

The scope of the present study was strictly limited to only one product category (i.e. shopping for clothing in general) and therefore the findings may or may not be generalised to include of other durable items. In addition, different types of clothing items were not specified (e.g. formal, informal) nor were specific clothing categories (e.g. sportswear, activewear, undergarment). While shopping for clothing has been the focus of a number of other retail patronage studies (e.g. Shim and Kotsiopoulos 1992a, 1992b; 1993; Md. Zain and Jabri 1996), there is evidence that different results may be obtained with different categories of purchase (Kim and Kang

2001). Further, this study did not cover all the variables of interest in a patronage behaviour model. Obviously, it is impossible to include all the possible variables in one single model. This was a conscious decision to keep the research instrument relatively short in order to encourage respondent participation.

Finally, the self-reported nature of data collection could have been introduced bias in the data. While items sought to measure behaviour such as use of information sources and shopping orientations should face no major complication in participants' response, religiosity items could suffer from social desirability biases due to the sensitive nature of the subject and the presence of the interviewer. As discussed by Khraim et al. (1999, p. 659), it is difficult to ask questions that some respondents (particularly religious Muslims) consider as sensitive things such as their religious behaviour. It is recommended that data collection that uses self-administered method should be explored in future to overcome this problem. However, at the time when data were collected for this study, personal interview technique was most suitable as other survey methods were expected to generate low response rate.

Despite the above limitations, the researcher hopes that the preliminary findings reported in this study will create greater interest in this topic, and hopefully engender future research activities which can contribute further to our understanding of this aspect of consumer behaviour. The findings detailed here indicate several opportunities for future research that may be quite prolific, especially if the methodological limitations of this study are remedied. Future work that builds on the findings of this study and overcomes its limitations is strongly recommended.

9.7 Recommendations for Future Research

Given the undeniable role that religion plays in shaping certain aspects of attitudes and values, including those related to economic life, the marketing importance of increasing our understanding of the relationship between religion and consumer behaviour seems apparent. Despite the methodological limitations experienced in conducting this research, it does provide a springboard for further dialogue on religion and consumer behaviour. There are, of course, several areas for improvements and possible directions that future research could take in order to continue to expand our understanding in this research domain.

The results and ideas presented in this study are basically exploratory in nature (even though they were analysed quantitatively). Thus the conclusion derived there from cannot be considered binding. Additional studies are warranted to validate the conclusions drawn from the present findings. One obvious direction would be to sample a wider variety of consumers with more diverse demographic backgrounds (e.g. rural and urban consumers, different religions) as these variables provide insights into retail patronage behaviour, based on the present findings.

It is suggested that future research endeavours should investigate the differences in the shopping patterns among members of the same religious affiliation in the same national culture or perhaps in international settings. Are there significant differences in shopping behaviours between devout and casually religious Muslims in Malaysia? What are the similarities and differences in shopping orientations between Muslim consumers in Malaysia and other Islamic countries? While the methodological challenge in conducting research on this issue is recognised, the

potentially valuable gains of successful work would make it plausible for the transfer of the knowledge of the religious effect to other country markets with the same dominant religion.

In addition, future research should probably examine other aspects of retail patronage activities that were not examined in the present study. For example, a study examining how religiosity affects loyalty patronage behaviour would offer potential implications for marketing strategists. As Schiffman and Kanuk (1991) have observed, “very little consumer research has been carried devoted to examining how religious affiliation and commitment influences consumer preferences and loyalties” (p. 436). Further research would add new dimension to the work that has already been reported and synthesised on choice decisions, thereby giving marketers and retailers a richer understanding of the shopping habit of religious consumers.

Considering the increasing importance of internet and the growth of online retailing, it would be interesting for researchers to study the influence of religious affiliation and religiosity on consumer purchase decisions in the web context. Given the present finding, it seems logical to expect that consumers’ tendency to use the internet and the amount of information sought from this media source may be meaningfully related to religious background of the web users. This is supported by the finding of one recent study demonstrating the noteworthy influence of religious affiliation on trust in the context of electronic commerce (Siala, O’Keefe and Hone 2004). Other potential relevant areas for investigation include the religious influences on online shopping orientation and website evaluative criteria.

The present study focused on shopping for clothing. Additional research is needed to confirm whether similar value dimension and correlations can be observed

with other shopping items such as small electronics and groceries. The present study could also be extended in the area of fashion retailing. One fertile opportunity for future studies would be the study of religious influences on consumer shopping behaviour for sensitive clothing items such as intimate apparels or environmentally influenced products such as fur and leather apparels. If one taken into account research findings indicating that religious persons are more sensitive towards the advertising of controversial products (Fam et al. 2004), it is anticipated that religion would have even greater influence on consumer purchasing pattern for these kinds of products.

It also seems interesting for future research to explore the changes that occurred in consumption behaviours when an individual has undergone the phenomenon of religious conversion. Religious conversion is an ongoing process where certain thoughts, feelings and patterns of behaviours are confirmed whereas others are changed. Unlike racial identity, which transfers from one generation to the next, religion is not a permanent status since individuals are free to choose their own religious faith from a set of alternative available for them (Goff and Gibbs 1993). It is expected that individuals' conversion from one religion to other religious faith could have a major impact on their consumption behaviours, as converters experiencing a transitional process in beliefs and practices, which lead to the formation of distinct consumption attitudes and behaviour.

While the method the researcher used for testing the proposed model is technically sound, it may not be the only way in which to test the model. Other research and statistical methods should be explored. It is recommended for future research to test the proposed model by using a more comprehensive and powerful statistical

technique such as Structural Equation Modeling (SEM) in order to obtain a more complete understanding of the causal sequence of the model. SEM is an extension of several multivariate techniques and is especially useful when a dependent variable becomes an independent variable in subsequent dependence relationship. In other words, unlike linear regression analysis applied in this study which can only examine a single relationship at a time, SEM allows interrelated dependence relationships. SEM also allows the representation of unobserved concepts or latent variables in structural relationships (Hair et al. 1998). Thus, the opportunity for future research is to test the model by employing SEM as a data analysis technique and to compare results with the present study.

Another element of future research could involve the creation and analysis of qualitative data and this could be undertaken prior to developing the survey instrument. Using previous existing instruments in the survey might not explain completely some aspects of consumer behaviours and the possible absence of key variables may have attenuated the results. As shown in the findings, some of the coefficients of determination (R^2 values) for the regression models used in the hypothesis tests were relatively low, indicating that the dependent variable is not sufficiently “explained” by the predictor variables. There might be additional key factors which need to be taken into account in considering the factors influencing the dependent variables. Qualitative research could help identify such factors. The data obtained could then be used to generate items to develop scales for the subsequent quantitative phase of the study.

The very personal nature of religious behaviours or beliefs makes it somewhat unrealistic to rely solely on quantitative data. For this reason, qualitative research method such as depth interview is recommended as a powerful tool for discovering consumers' religious values, ideas and motivation in more depth. According to Strauss and Corbin (1990), data collection method in qualitative research permits a detailed description and analysis and is appropriate when the researcher is attempting to discover what lies behind a phenomenon about which little is known. Since little attention has been paid in the literature to the relationship between religion and consumer behaviour, qualitative research is particularly appropriate as a precursor to or to complement the quantitative research. By applications of methodological triangulation in future research, it is expected that the disadvantages of pure quantitative or pure qualitative methods of research could be minimised (Tashakkori and Teddlie 1998). In this way, the highly complex nature of the religious influences on consumer behaviour is maintained and data are not loss. This, in turn, would add both breadth and depth to our understanding of consumer behaviour.

9.8 Conclusion

This final chapter presented conclusions on the main findings of the study, discusses its implications for marketing theory and practices, as well as the limitations before suggestions for future research were discussed.

Religion represents the most basic element of the individual's cognitive world. As such, they structure the individual's perception and understanding of himself, of significant others and of the objects and behaviours which constitute his psychological environment. It is crucial not to underestimate the importance and potential of religion as an explanatory construct in predicting human behaviour.

While the fact is that religion can influence human behaviour in general and consumption in particular, the efficacy of the religious subculture as a device for differentiating consumers remains virtually unexplored. As a result of this obvious neglect, marketing theory and practice is seriously underdeveloped. In this regard, this study attempts to provide some preliminary clues of what may prove to be one of the most important and pervasive influences on consumer behaviour. The study arrived at interesting, albeit tentative, conclusions regarding the effects religious values on consumer behaviour. As shown in this study involving respondents across four religious traditions in Malaysia, religion in general can be meaningfully related to both functional and non-functional aspects of retail patronage behaviour, supporting an earlier argument favouring the inclusion of this construct in an examination of consumer behaviour.

An examination of religion provides a good starting point in our quest to develop a greater knowledge of consumers' behaviour in their specific cultural context. Formal study of religion's effect will improve understanding of the normative

aspects of consumer behaviour; social symbolic aspects of market behaviour which have been largely neglected by the research community. With this study, the researcher hopes to contribute to the limited body of scholarly research in this subject area and to provide a basis and motivation for further research on the emerging but largely unknown religious markets in Malaysia. For a factor that so profoundly affects human behaviour, further research is warranted to gain greater understanding of the extent to which religion influences consumer choices and purchase activities.

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APPENDICES

Appendix A Previous Consumer Behaviour Research on Religion

Author(s)	Method	Sample	Product	Dimensions	Focus of the study
Engel (1976)	Group interview	Church members (n = 2,625)	No product involved	Denominational affiliation	Psychographic profile
Thomson & Raine (1976)	Personal interview	Protestant (n = 854)	No product involved	Denominational affiliation	Store location
Hirschman (1981)	Self-administered questionnaire	Jewish (n = 192) Non-Jewish (n = 469)	No product involved	Religious affiliation	Jewish ethnicity
Hirschman (1982a)	Self-administered questionnaire	Catholic (n = 96) Jewish (n = 120) Protestant (n = 114)	No product involved	Religious affiliation	Novelty seeking and information transfer
Hirschman (1982b)	Self-administered questionnaire	Catholic (n = 166) Jewish (n = 172) Protestant (n = 80)	No product involved	Religious affiliation	Leisure activities and motives
Hirschman (1982c)	Self-administered questionnaire	Catholic (n = 167) Jewish (n = 228) Protestant (n = 55)	No product involved	Religious affiliation	Hedonic consumption
Hirschman (1983)	Self-administered questionnaire	Catholic (n = 96) Jewish (n = 120) Protestant (n = 114)	No product involved	Religious affiliation	Consumption patterns

Hirschman (1985)	Self-administered questionnaire	Catholic (n = 116) Jewish (n = 163) Protestant (n = 53)	No product involved	Religious affiliation	Media content preferences
Wilkes, Burnett & Howell (1986)	Mail survey	Mostly Protestant (n = 602)	No product involved	Religiosity	Measurement of religiosity and consumer lifestyles
Delener (1987)	Self-administered questionnaire	Catholic (n = 204) Jewish (n = 145)	No product involved	Religious affiliation	Value structure
LaBarbera (1987)	Case study	Born-again Christian	No product involved	Religious affiliation	General consumer behaviour of born-again Christians
Delener & Schiffman (1988)	Self-administered questionnaire	Catholic (n = 204) Jewish (n = 145)	Microwave oven & automobile	Religious affiliation Religiosity	Family decision-making
Delener (1989)	Self-administered questionnaire	Catholic (n = 131) Jewish (n = 76)	Microwave oven & automobile	Religious affiliation Religiosity	External information search
Nix & Gibson (1989)	Telephone survey	Former patients (n = 200)	No product involved	Religious affiliation	Selection of hospital and patient satisfaction
LaBarbera & Stern (1990)	Self-administered questionnaire	Orthodox Jewish Non-Orthodox Jewish	Non-durable products	Denominational affiliation	Repeat purchase behaviour

Delener (1990a)	Self-administered questionnaire	Catholic (n = 131) Jewish (n = 76)	Microwave oven & automobile	Religious affiliation Religiosity	Consumer innovativeness
Delener (1990b)	Self-administered questionnaire	Catholic (n = 131) Jewish (n = 76)	Microwave oven & automobile	Religious affiliation Religiosity	Perceived risk aversion
McDaniel & Burnett (1990)	Mail survey	Protestant (n = 314) Catholic (n = 264) Jewish (n = 39)	No product involved	Religious affiliation Religiosity	Store evaluative criteria
McDaniel & Burnett (1991)	Mail survey	Born-Again (n = 108) Non Born-Again (n = 442)	No product involved	Denominational affiliation	Media usage behaviour
Smith & Frankenberger (1991)	Mail survey	Protestant (n = 316) Catholic (n = 159) Jewish (n = 105) Other (n = 68) None (n = 15)	No product involved	Religiosity	Shopping criteria
Clark (1992)	Self-administered questionnaire	Student sample (n = 182)	No product involved	Religiosity	Store evaluative criteria
Andaleeb (1993)	Self-administered questionnaire	RAH and NRAH patients (n = 130)	No product involved	Religious affiliation	Hospital selection and evaluation of medical services

Bailey & Sood (1993)	Self-administered questionnaire	Buddhist (n = 28) Catholic (n = 90) Hindu (n = 16) Islam (n = 40) Jewish (n = 31) Protestant (n = 107) Non-religious (n = 37)	Stereo sound system	Religious affiliation	Shopping behaviour
Rodriguez (1993)	Personal interview	Catholic (n = 313)	Expensive radio	Religiosity	Purchasing patterns of Peruvian consumers
Haron, Ahmad & Planisek (1994)	Self-administered questionnaire	Muslim (n = 150) Non-Muslim (n = 151)	No product involved	Religious affiliation	Bank patronage factors in Malaysia
Delener (1994)	Self-administered questionnaire	Catholic (n = 131) Jewish (n = 76)	Automobile	Religious affiliation Religiosity	Family decision-making
Sood & Nasu (1995)	Self-administered questionnaire	Shinto (n = 125) Protestant (n = 105)	Expensive radio	Religious affiliation Religiosity	Shopping behaviour in Japan and US
Michell & Al-Mossawi (1995)	Experiment	Christian (n = 200) Muslim (n = 200)	No product involved	Religiosity	Advertising effectiveness
LaBarbera & Gurhan (1997)	Self-administered questionnaire	Born-again and non-born-again Christian (n = 241)	No product involved	Religiosity	Materialism and subjective well-being

Siguaw, Simpson & Joseph (1995)	Telephone interview	n = 338 (U.S. sample) n = 60 (N.Z. sample)	No product involved	Religiosity	Sunday shopping and outshopping
Siguaw & Simpson (1997)	Telephone interview	n = 338 (Fundamentalist, Protestant, Catholic, Other)	No product involved	Religiosity	Sunday shopping and outshopping
Michell & Al-Mossawi (1999)	Experiment	Bahraini Muslim (n = 800)	No product involved	Religiosity	Perceived message of TV commercials in Bahrain
Siala, O'Keefe & Hone (2004)	Experiment	Christian (n = 29) Muslim (n = 38) Others (n = 24)	Books	Religious affiliation	Trust in e-commerce
Fam, Waller & Erdogan (2004)	Self-administered questionnaire	n = 1,393 (Buddhist, Muslim, Christian, Hindu and non-religious believers)	No product involved	Religious affiliation	Attitudes towards the advertising of controversial products
Essoo & Dibb (2004)	Mail survey	Hindu (n= 324) Catholic (n = 198) Muslim (n = 78)	Television set	Religious affiliation Religiosity	Shopping behaviour in Mauritius

Appendix B
Correspondences



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20 July 2003

Hello,

My name is Safiek Mokhlis, a tutor from Kolej Universiti Sains dan Teknologi Malaysia and currently doing a PhD in marketing at the University of Stirling, United Kingdom. As part of my study, I am collecting information from selected households living in this residential area on their opinion pertaining to religiosity, lifestyle, shopping orientation and store patronage behaviour.

It is my pleasure to inform that you have been chosen to participate in this study. My research assistance will visit your place in these few days (after 6.00 pm during weekdays or after 3.00 pm on Saturday or after 10.00 am on Sunday) to interview you for this research purpose. The interview will take about half an hour. I would appreciate if you could give your cooperation to him/her by devoting your precious time to the interview. It must be stressed here that the data obtained from this survey is solely for academic purposes (not for commercial) and all the information will be strictly confidential.

Should you have any queries or wish to know more about this study, feel free to ring me, Safiek Mokhlis at 03-33925911 or 013-2709940. Your kind cooperation and indirect contribution to my study is highly appreciated. Thank you.

Yours sincerely,

(SAFIEK MOKHLIS)
Department of Marketing
University of Stirling



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20 Julai 2003

Saudara/saudari,

Nama saya Safiek Mokhlis, tutor di Kolej Universiti Sains dan Teknologi Malaysia dan kini sedang mengikuti pengajian Doktor Falsafah (PhD) dalam bidang pemasaran di University of Stirling, United Kingdom. Sebagai memenuhi keperluan bagi PhD saya, saya mengumpul maklumat daripada isi rumah di kawasan perumahan anda mengenai keagamaan, gaya hidup, orientasi pembelian dan kelakuan kunjungan kedai.

Justeru, adalah dimaklumkan bahawa tuan/puan telah terpilih untuk mengambil bahagian dalam kajian ini. Pembantu saya akan mengunjungi kediaman anda dalam beberapa hari akan datang (selepas 6.00 petang hari biasa atau selepas 3.00 petang hari Sabtu atau selepas 10.00 pagi hari Ahad) untuk menemuramah anda bagi tujuan kajian ini. Temuramah akan mengambil masa kira-kira setengah jam. Saya berbesar hati kiranya anda dapat memberi kerjasama dengan meluangkan sedikit masa untuk tujuan ini. Data-data yang diperolehi hanya bertujuan akademik (bukan untuk komersial) dan segala maklumat akan dianggap sulit.

Sekiranya anda terdapat sebarang pertanyaan atau ingin mengetahui dengan lebih lanjut mengenai kajian ini, sila hubungi saya, Safiek Mokhlis di talian 03-33925911 atau 013-2709940. Kerjasama dan sumbangan tuan/puan dalam kajian saya ini adalah sangat di hargai. Sekian, terima kasih.

Yang benar,

(SAFIEK MOKHLIS)
Jabatan Pemasaran
University of Stirling

Appendix C
Survey Questionnaire

Section A: Religiosity

A. Religious commitment

Please indicate your reactions to the following statements by using the scale below:

1 – strongly disagree	2 – disagree	3 – neither disagree nor agree	4 – agree	5 – strongly agree	
Religion is especially important to me because it answers many questions about the meaning of life	1	2	3	4	5
I often read books and magazines about my faith	1	2	3	4	5
I spend time trying to grow in understanding of my faith	1	2	3	4	5
My religious beliefs lie behind my whole approach to life	1	2	3	4	5
I make financial contributions to my religious organisation	1	2	3	4	5
I enjoy spending time with others of my religious affiliation	1	2	3	4	5
Religious beliefs influence all my dealings in life	1	2	3	4	5
It is important to me to spend periods of time in private religious thought and prayer	1	2	3	4	5
I enjoy taking part in activities of my religious organisation	1	2	3	4	5
I keep well informed about my local religious group and have some influence in its decisions	1	2	3	4	5

B. Perceived strength of religiosity

How would you rate the strength of your religiosity?

Very strong						Very weak
6	5	4	3	2		1

Section B: Lifestyle

Please indicate your reactions to the following statements by using the scale below:

1 – strongly disagree	2 – disagree	3 – neither disagree nor agree	4 – agree	5 – strongly agree	
Children brings closer the relationship between husband and wife	1	2	3	4	5
I influence my friends in their purchases	1	2	3	4	5
Husband should accompany his wife shopping	1	2	3	4	5
Friends ask my advice on new products in the market	1	2	3	4	5
I like to wear traditional clothes	1	2	3	4	5
I like to try new things before others do	1	2	3	4	5
I should hold on to the traditional values of my people	1	2	3	4	5
Friends ask me for information about new brands in the market	1	2	3	4	5
I like to conform to the traditional values of my peoples	1	2	3	4	5
The traditional values of my people will slowly erode in time	1	2	3	4	5
It is important for me to feel that I belong to my ethnic group	1	2	3	4	5
A child should be taught to respect parental authority	1	2	3	4	5
The traditional values of my peoples are important to me	1	2	3	4	5
Most of the latest fashion is not suitable for me	1	2	3	4	5

Section C: Shopping Orientation

Please indicate your reactions to the following statements by using the scale below:

1 – strongly disagree	2 – disagree	3 – neither disagree nor agree	4 – agree	5 – strongly agree	
I make purchases only when there is a need, not on impulse	1	2	3	4	5
It is important to me that my clothes are of the latest style	1	2	3	4	5
I prefer to buy things on sale	1	2	3	4	5

Owning branded goods can enhance one's status and prestige	1	2	3	4	5
I generally try to buy branded goods	1	2	3	4	5
I usually watch the advertisement for announcement of sales	1	2	3	4	5
I usually continue to shop around even after making purchases	1	2	3	4	5
Shopping takes the boredom out of daily routines	1	2	3	4	5
I view shopping as a social activity	1	2	3	4	5
It is generally worth it to pay more for quality	1	2	3	4	5
I often buy things which I never intended to buy	1	2	3	4	5
I consider myself to be trendy	1	2	3	4	5
I can save a lot of money by shopping around for bargains	1	2	3	4	5
I am concerned about brand names when making purchases	1	2	3	4	5
I do not compare prices before making my purchases	1	2	3	4	5
I find myself checking the prices in different stores even for small items	1	2	3	4	5
I do not consider shopping as fun	1	2	3	4	5
The quality of merchandise I buy is more important to me than the prices I have to pay	1	2	3	4	5
I often feel guilty for buying so many unnecessary things	1	2	3	4	5
I look for quality in a product and is willing to pay extra for it	1	2	3	4	5
I am willing to splurge on status symbols like branded watches, wallets, clothing etc.	1	2	3	4	5
I have somewhat old fashioned tastes and habits	1	2	3	4	5
I read fashion news regularly to see what is new in fashion	1	2	3	4	5
I usually have outfits that are of the very latest design	1	2	3	4	5
I like to go shopping	1	2	3	4	5
I think I am impulsive buyer	1	2	3	4	5

Section D: Importance of Store Attributes

Below you will find a listing of 12 key retail store attributes. For each attribute, please indicate your importance attached when choosing which store to shop. Use one of the following response options:

1 – Not important at all	2 – Not important	3 – Somewhat important	4 – Important	5 – Very important	
Reputation of store	1	2	3	4	5
Brand carried by store	1	2	3	4	5
Helpfulness of salespersons	1	2	3	4	5
Class of clientele	1	2	3	4	5
Reputation for fashion	1	2	3	4	5
Physical attractiveness of store	1	2	3	4	5
Special sales or promotions	1	2	3	4	5
Merchandise display	1	2	3	4	5
Variety of selection	1	2	3	4	5
Merchandise prices	1	2	3	4	5
Quality of merchandise	1	2	3	4	5
Proximity of location	1	2	3	4	5

Section E: Information Sources

How often do you refer to the following information sources when selecting a store or to buy an apparel/clothing? Use one of the following response options:

1 – Never	2 – Rarely	3 – Sometimes	4 – Quite often	5 – Always	
Television advertising	1	2	3	4	5
Catalogues/brochures	1	2	3	4	5
Magazine advertising	1	2	3	4	5
Newspaper advertising	1	2	3	4	5
Friend's opinion	1	2	3	4	5
Family/relatives	1	2	3	4	5
Salesperson's advice	1	2	3	4	5

You are: [1] Malay [3] Indian
[2] Chinese [4] Others (please specify _____)

Your religion is: [1] Islam [5] Taoism
[2] Buddhism [6] Confucianism
[3] Hinduism [7] Free thinker
[4] Christianity [8] Others (please specify _____)

Education attainment: [1] Secondary school [3] First degree
[2] Diploma [4] Masters degree and above

Occupation: [1] Self-employed [2] Government employee
[3] Private sector employee [4] Housewife/retired/unemployed

Your monthly income (for single); your combined incomes (for married); your spouse's income (for non working individuals):

[1] Not appropriate [5] RM 3,501 – RM 5,500
[2] Less than RM 1,500 [6] RM 5,501 – RM 7,500
[3] RM 1,501 – RM 2,500 [7] RM 7,501 – RM 10,000
[4] RM 2,501 – RM 3,500 [8] RM 10, 001 and above

Many thanks for your cooperation

Bahagian A: Keagamaan

A. Komitmen agama

Nyatakan reaksi anda terhadap setiap pernyataan di bawah berdasarkan kepada skel berikut:

1 – sangat tidak setuju	2 – tidak setuju	3 – tidak pasti	4 – setuju	5 – sangat setuju	
Agama sangat penting bagi saya kerana ia menjawab banyak persoalan tentang erti kehidupan	1	2	3	4	5
Saya selalu membaca buku dan majalah mengenai agama saya	1	2	3	4	5
Saya meluangkan masa untuk cuba meningkatkan kefahaman agama saya	1	2	3	4	5
Kepercayaan agama saya adalah teras bagi keseluruhan pendekatan saya pada kehidupan	1	2	3	4	5
Saya membuat sumbangan kewangan kepada pertubuhan agama saya	1	2	3	4	5
Saya seronok meluangkan masa dengan yang lain dalam kumpulan agama saya	1	2	3	4	5
Kepercayaan agama mempengaruhi kesemua urusan dalam hidup saya	1	2	3	4	5
Adalah penting bagi saya untuk meluangkan masa bersembahyang dan berfikir mengenai agama	1	2	3	4	5
Saya seronok menyertai aktiviti-aktiviti pertubuhan agama saya	1	2	3	4	5
Saya mengikuti perkembangan kumpulan agama di tempat saya dan mempunyai pengaruh di dalamnya	1	2	3	4	5

B. Kekuatan keagamaan

Sejauh manakah anda menilai kekuatan keagamaan anda?

Sangat kuat						Sangat lemah
6	5	4	3	2	1	

Bahagian B: Gayahidup

Nyatakan reaksi anda terhadap setiap pernyataan di bawah berdasarkan kepada skel berikut:

1 – sangat tidak setuju	2 – tidak setuju	3 – tidak pasti	4 – setuju	5 – sangat setuju	
Anak-anak merapatkan hubungan di antara suami dan isteri	1	2	3	4	5
Saya mempengaruhi rakan-rakan dalam pembelian mereka	1	2	3	4	5
Suami sepatutnya menemani isteri membeli-belah	1	2	3	4	5
Kawan-kawan meminta nasihat daripada saya mengenai keluaran-keluaran terbaru di pasaran	1	2	3	4	5
Saya suka memakai pakaian tradisional	1	2	3	4	5
Saya suka mencuba perkara-perkara terbaru sebelum orang lain mencubanya	1	2	3	4	5
Saya seharusnya berpegang teguh pada nilai-nilai hidup tradisional kaum saya	1	2	3	4	5
Kawan-kawan meminta maklumat daripada saya berhubung dengan jenama-jenama terbaru di pasaran	1	2	3	4	5
Saya suka menuruti kehendak nilai-nilai tradisional masyarakat saya	1	2	3	4	5
Nilai-nilai tradisi kaum saya mungkin merosot dengan perlahan-lahan melalui masa	1	2	3	4	5
Adalah penting bagi saya merasakan bahawa saya adalah anggota masyarakat kaum saya	1	2	3	4	5
Seorang anak seharusnya diajar menghormati ibu-bapanya	1	2	3	4	5
Nilai-nilai hidup tradisional masyarakat saya adalah penting bagi saya	1	2	3	4	5
Kebanyakan fesyen terkini adalah tidak sesuai dengan saya	1	2	3	4	5

Bahagian C: Orientasi Pembelian

Nyatakan reaksi anda terhadap setiap pernyataan di bawah berdasarkan kepada skel berikut:

1 – sangat tidak setuju	2 – tidak setuju	3 – tidak pasti	4 – setuju	5 – sangat setuju	
Saya membuat pembelian apabila timbul keperluan, bukan menurut gerak hati	1	2	3	4	5
Adalah penting bagi saya mempunyai pakaian gaya terkini	1	2	3	4	5
Saya gemar membeli barangan jualan murah	1	2	3	4	5
Memiliki barangan berjenama boleh meningkatkan status dan prestij diri seseorang	1	2	3	4	5
Saya secara umumnya cuba untuk membeli barangan berjenama	1	2	3	4	5
Saya biasanya melihat iklan bagi pengumuman jualan murah	1	2	3	4	5
Saya biasanya terus meninjau barangan walaupun selepas membuat pembelian	1	2	3	4	5
Membeli-belah dapat menghilangkan rasa kebosanan dari rutin seharian	1	2	3	4	5
Saya memandangi beli-belah sebagai satu aktiviti sosial	1	2	3	4	5
Secara umumnya, adalah lebih berbaloi membayar lebih untuk kualiti	1	2	3	4	5
Saya kerap membeli barangan yang saya tidak saya rancang	1	2	3	4	5
Saya menilai diri saya sebagai seorang yang mengikut gaya terkini	1	2	3	4	5
Saya dapat menjimatkan banyak wang dengan meninjau barangan murah	1	2	3	4	5
Saya mementingkan jenama apabila membuat pembelian	1	2	3	4	5
Saya tidak membandingkan harga sebelum membuat pembelian	1	2	3	4	5
Saya membandingkan harga di kedai-kedai yang berlainan walaupun untuk barangan yang kecil	1	2	3	4	5
Saya tidak menganggap membeli-belah satu keseronokan	1	2	3	4	5

Kualiti barangan yang saya beli adalah lebih penting berbanding harga yang perlu saya bayar	1	2	3	4	5
Saya kerap rasa bersalah kerana terlalu banyak membeli barangan yang tidak diperlukan	1	2	3	4	5
Saya melihat pada kualiti barangan dan sanggup membayar lebih untuknya	1	2	3	4	5
Saya sanggup berbelanja besar untuk barangan bersimbol status seperti jam, dompet dan pakaian yang berjenama	1	2	3	4	5
Saya mempunyai tabiat dan citarasa yang kolot	1	2	3	4	5
Saya selalu membaca berita fesyen untuk melihat apakah yang terbaru dalam fesyen	1	2	3	4	5
Saya mempunyai pakaian yang terdiri dari rekaan paling terkini	1	2	3	4	5
Saya suka membeli-belah	1	2	3	4	5
Saya seorang pembeli yang menurut gerak hati	1	2	3	4	5

Bahagian D: Kepentingan citra kedai

Di bawah ini merupakan senarai 12 ciri-ciri pasaraya/kedai. Bagi setiap satu, sila nyatakan sejauh mana kepentingannya pada anda apabila membuat pilihan pasaraya/kedai untuk membeli-belah bagi pakaian. Gunakan salah satu daripada pilihan berikut:

	1 – Sangat tidak penting	2 – Tidak penting	3 – Agak penting	4 – Penting	5 – Sangat penting
Reputasi pasaraya	1	2	3	4	5
Jenama yang di jual	1	2	3	4	5
Jurujual yang sedia membantu	1	2	3	4	5
Status sosial pelanggan	1	2	3	4	5
Reputasi dalam fesyen	1	2	3	4	5
Daya tarikan fizikal pasaraya	1	2	3	4	5
Promosi atau jualan istimewa	1	2	3	4	5
Susun atur barangan	1	2	3	4	5
Kepelbagaian pilihan	1	2	3	4	5
Harga barangan	1	2	3	4	5
Kualiti barangan	1	2	3	4	5
Kedekatan lokasi	1	2	3	4	5

Bahagian E: Sumber Maklumat

Berapa kerapkah anda merujuk kepada sumber-sumber maklumat berikut apabila membuat pilihan pasaraya atau untuk membeli pakaian? Gunakan salah satu daripada pilihan berikut:

1 – Tidak pernah
2 – Agak jarang

3 – Sekali-sekala
4 – Agak kerap

5 – Selalu

Iklan televisyen	1	2	3	4	5
Katalog/risalah	1	2	3	4	5
Iklan majalah	1	2	3	4	5
Iklan suratkhbar	1	2	3	4	5
Pendapat kawan-kawan	1	2	3	4	5
Pendapat keluarga/saudara-mara	1	2	3	4	5
Nasihat jurujual	1	2	3	4	5

Bahagian F: Kelakuan Pembelian

Sila nyatakan (bulatkan) berapa kerapkah anda mengunjungi setiap kedai dan pasaraya yang berikut dalam jangkamasa **12 bulan** yang lepas bagi membuat pembelian **PAKAIAN**?

	Tidak pernah	Agak jarang	Sekali-sekala	Agak kerap	Sangat kerap
Hypermarket (contoh: Makro, Carrefour, Giant)	1	2	3	4	5
Pasaraya berjabatn (contoh: Sogo, Ocean, The Store, Jaya Jusco, Metrojaya)	1	2	3	4	5
Pasaraya khas berjabatn (contoh: Kamdar, Globe Silk Store)	1	2	3	4	5
Kedai khas (contoh: butik fesyen, kedai jahit, kedai kain, Reject Shop)	1	2	3	4	5
Katalog (contoh: Avon, Cosway, Amway, Caelygirl)	1	2	3	4	5

Secara purata, berapa banyakkah wang yang anda belanjakan setiap kali membuat pembelian **PAKAIAN** di kedai dan pasaraya berikut?

- | | | | |
|------------------|-----|------------------|-----|
| Kurang dari RM50 | [] | RM 251 – RM400 | [] |
| RM 51 – RM 100 | [] | RM 251 – RM400 | [] |
| RM 101 – RM 250 | [] | Lebih dari RM600 | [] |

Bahagian G: Demografi

Akhir sekali, sila nyatakan tentang diri anda (tandakan satu).

Jantina:[1] Lelaki [2] Perempuan

Taraf perkahwinan:

- | | |
|-------------------------|---------------|
| [1] Bujang | [2] Berkahwin |
| [3] Bercerai/duda/janda | |

Usia: [1] 21-25 tahun [5] 41-45 tahun
[2] 26-30 tahun [6] 46-50 tahun
[3] 31-35 tahun [7] 51 tahun dan ke atas
[4] 36-40 tahun

Bangsa: [1] Melayu [3] India
[2] Cina [4] Lain-lain (nyatakan _____)

Agama: [1] Islam [5] Tao
[2] Buddha [6] Confucius
[3] Hindu [7] Pemikiran bebas
[4] Kristian [8] Lain-lain (nyatakan _____)

Tahap pendidikan:

- | | |
|----------------------|--------------------------------|
| [1] Sekolah menengah | [3] Ijazah pertama |
| [2] Diploma | [4] Ijazah sarjana dan ke atas |

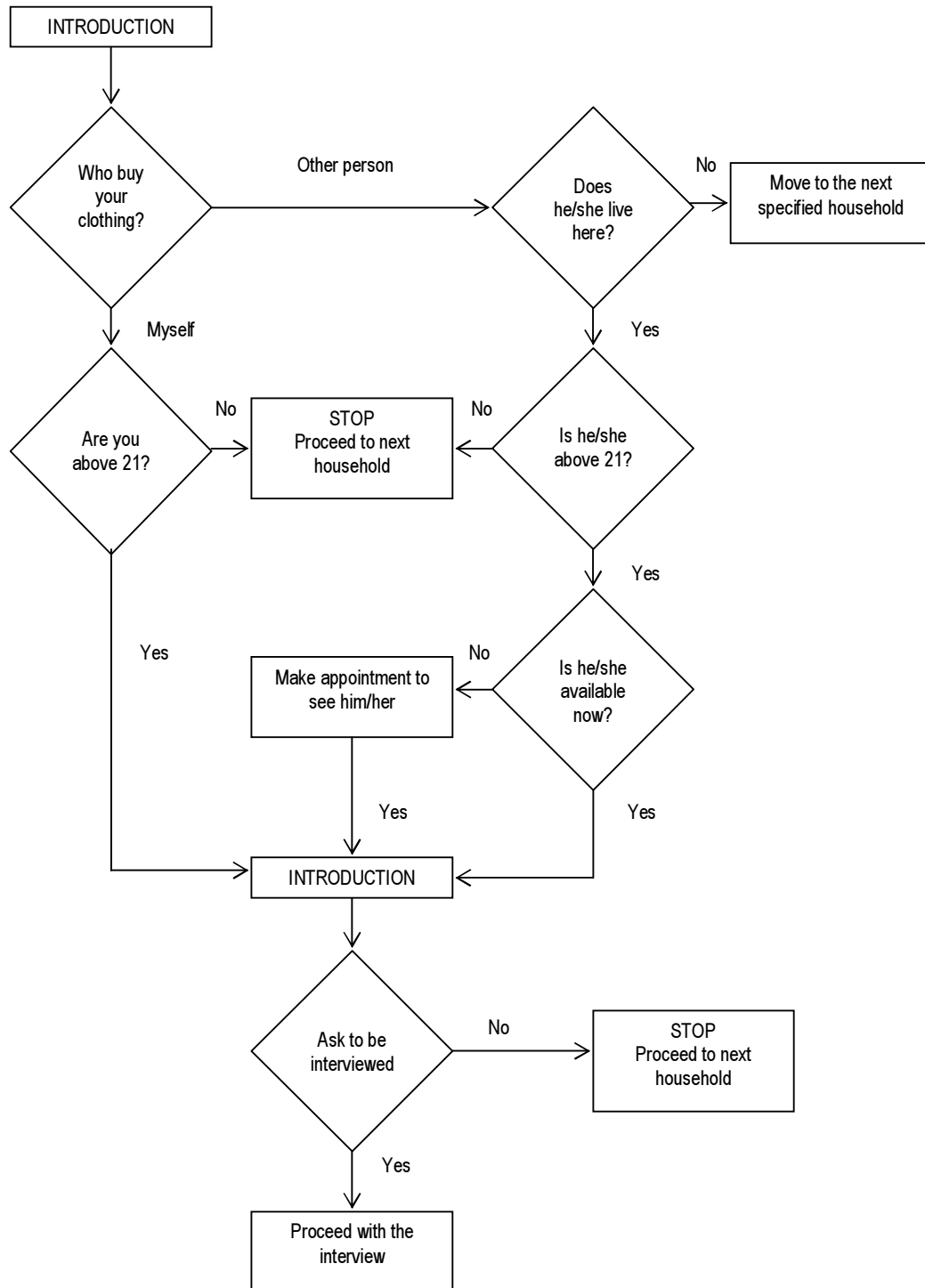
Pekerjaan: [1] Berkerja sendiri [2] Sektor kerajaan
[3] Sektor swasta [4] Surirumah/pesara/tidak berkerja

Pendapatan bulanan anda (bagi yang bujang); pendapatan bersama (bagi yang berkahwin); pendapatan suami/isteri/penanggung (bagi yang tidak bekerja):

- | | |
|--------------------------|----------------------------|
| [1] Tidak dikenakan | [5] RM 3,501 – RM 5,500 |
| [2] Kurang dari RM 1,500 | [6] RM 5,501 – RM 7,500 |
| [3] RM 1,501 – RM 2,500 | [7] RM 7,501 – RM 10,000 |
| [4] RM 2,501 – RM 3,500 | [8] RM 10, 001 dan ke atas |

Terima kasih di atas kerjasama anda

Appendix D A Guide to Approach the Subject



Appendix E Descriptive Statistics

Religiosity

Variable	Mean	S.D.	Skewness	Kurtosis
Intrapersonal religiosity	4.11	0.66	-1.02	0.58
Interpersonal religiosity	3.45	0.63	-0.90	1.53

Lifestyle

Variable	Mean	S.D.	Skewness	Kurtosis
Ethnic conscious	3.68	0.66	-0.64	1.05
Innovativeness	3.02	0.72	-0.09	-0.24
Traditional family	4.05	0.74	-0.92	0.78
Fashion conservative	3.44	1.01	-0.46	-0.43

Information source

Variable	Mean	S.D.	Skewness	Kurtosis
Media	2.36	0.81	0.24	-0.42
Personal	2.31	0.71	0.34	-0.31

Shopping orientation

Variable	Mean	S.D.	Skewness	Kurtosis
Brand conscious	2.94	0.86	0.15	-0.22
Shopping enjoyment	3.26	0.83	-0.42	-0.12
Fashion conscious	2.79	0.83	0.11	-0.19
Quality conscious	3.82	0.7	-0.45	0
Impulsive shopping	3.04	0.89	-0.06	-0.51
Price conscious	3.66	0.74	-0.34	-0.39

Store attributes

Variable	Mean	S.D.	Skewness	Kurtosis
Ethnic conscious	3.22	0.85	-0.19	-0.31
Innovativeness	4.23	0.49	-0.27	-0.5
Traditional family	3.08	0.82	-0.09	-0.41
Fashion conservative	3.89	0.66	-0.45	-0.04

Store patronage

Variable	Mean	S.D.	Skewness	Kurtosis
Hypermarket	2.77	1.13	0	-0.88
Department store	3.39	0.96	-0.35	-0.11
Specialty department	2.47	1.07	0.13	-0.97
Specialty store	2.47	1.01	0.4	-0.31
Catalogue	2.03	1.06	0.76	-0.27

Appendix F Correlation Matrix

Correlation matrix of independent variables: religiosity, religious affiliation, demographics and lifestyles

	Intra	Inter	Ra1	Ra2	Ra3	Ethnic	Inno	Trad	Consv	Gender	Eth1	Eth2	Age	Marital	Wstat	Edu	Inc
Intra	1.000																
Inter	0.540**	1.000															
Ra1	0.438**	0.116	1.000														
Ra2	-0.280**	-0.052	-0.531**	1.000													
Ra3	-0.173**	-0.087	-0.385**	0.244**	1.000												
Ethnic	0.195**	0.198**	0.170*	-0.137*	0.110	1.000											
Inno	0.035	0.081	-0.038	0.037	0.100	0.157*	1.000										
Trad	0.388**	0.333**	0.186**	-0.154*	-0.031	0.268**	0.145*	1.000									
Consv	0.316**	0.211**	0.188**	-0.156*	0.063	0.173**	-0.087	0.375**	1.000								
Gender	0.085**	0.109	-0.008	0.025	-0.123	0.140*	0.056	0.062	-0.081	1.000							
Eth1	-0.298**	-0.060	-0.626**	0.781**	-0.270**	-0.238**	-0.052	-0.176**	-0.194**	0.041	1.000						
Eth2	-0.193**	-0.071	-0.481**	-0.256**	0.770**	0.056	0.097	-0.034	-0.010	-0.050	-0.371**	1.000					
Age	-0.010	0.056	-0.255**	0.222**	-0.035	-0.143*	-0.229**	-0.055	0.173**	-0.056	0.245**	0.021	1.000				
Marital	0.193**	0.087	0.069	-0.054	0.020	0.104	-0.140*	0.012	0.165*	0.026	-0.093	0.010	0.470**	1.000			
Wstat	-0.066	-0.120	0.043	0.044	-0.038	0.069	-0.119	0.014	0.027	-0.019	0.024	-0.082	0.252**	0.104	1.000		
Edu	-0.060	-0.091	-0.077	-0.079	0.013	-0.117	0.046	-0.073	0.042	-0.008	0.050	0.043	-0.047	-0.057	-0.179**	1.000	
Inc	0.012	0.089	-0.108	0.007	-0.028	-0.121	-0.059	-0.010	0.035	0.071	0.130	0.001	0.211**	0.113	0.053	0.051	1.00

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

* Correlation is significant at the 0.05 level (2-tailed)

Appendix G Multicollinearity Tests for Multiple Linear Regression Analysis

Multicollinearity diagnostic tests (information source)

Dependent variables	Variables entered	Tolerance values	VIF	Condition index
Media source	Innovativeness	0.956	1.046	8.144
	Intrapersonal religiosity	0.816	1.226	12.398
	Fashion conservative	0.806	1.241	16.421
	Traditional family	0.753	1.328	21.035
Personal source	Interpersonal religiosity	0.705	1.419	9.078
	Intrapersonal religiosity	0.709	1.411	16.189
	Innovativeness	0.993	1.007	19.082

Multicollinearity diagnostic tests (shopping orientation)

Dependent variables	Variables entered	Tolerance values	VIF	Condition index
Brand conscious	Innovativeness	0.963	1.038	7.246
	Ethnic conscious	0.940	1.064	11.095
	Fashion conservative	0.956	1.046	16.858
Shopping enjoyment	Innovativeness	0.928	1.077	2.736
	Ethnic conscious	0.884	1.131	3.834
	Gender	0.961	1.041	8.92
	Traditional family	0.790	1.266	13.503
	Fashion conservative	0.818	1.223	16.353
	Ethnic2	0.981	1.019	21.344
Fashion conscious	Innovativeness	0.993	1.071	2.718
	Education	0.990	1.010	3.912
	Age	0.745	1.342	5.129
	Marital status	0.773	1.294	7.195
	Fashion conservative	0.958	1.044	9.074
	Ethnic2	0.987	1.014	18.165
Quality conscious	Interpersonal religiosity	0.694	1.442	5.194
	Innovativeness	0.938	1.066	7.285
	Age	0.903	1.107	11.296
	Income	0.948	1.055	19.552
	Intrapersonal religiosity	0.706	1.416	23.972
Impulsive shopping	Intrapersonal religiosity	0.709	1.411	9.078
	Innovativeness	0.993	1.007	16.189
	Interpersonal religiosity	0.705	1.419	19.082
Price conscious	Interpersonal religiosity	0.695	1.440	3.754
	Innovativeness	0.986	1.014	6.968
	Intrapersonal religiosity	0.706	1.416	10.815
	Income	0.982	1.019	19.148
	Gender	0.981	1.020	23.053

Multicollinearity diagnostic tests (store attributes)

Dependent variables	Variables entered	Tolerance values	VIF	Condition index
Merchandise	Interpersonal religiosity	0.697	1.434	10.12
	Innovativeness	0.972	1.029	13.536
	Ethnic conscious	0.930	1.076	18.78
	Intrapersonal religiosity	0.700	1.428	22.156
Reputation	Interpersonal religiosity	0.968	1.033	2.823
	Religion1	0.984	1.016	3.503
	Gender	0.986	1.015	10.079
	Innovativeness	0.989	1.011	17.002
Attractiveness	Intrapersonal religiosity	0.709	1.411	9.078
	Interpersonal religiosity	0.705	1.419	16.189
	Innovativeness	0.993	1.007	19.082
Price	Intrapersonal religiosity	0.642	1.557	2.785
	Age	0.896	1.116	3.717
	Religion2	0.858	1.166	5.828
	Gender	0.974	1.027	7.449
	Income	0.940	1.064	18.716
	Interpersonal religiosity	0.688	1.453	23.566

Multicollinearity diagnostic tests (store patronage)

Dependent variables	Variables entered	Tolerance values	VIF	Condition index
Hypermarket	Traditional family	0.979	1.022	8.736
	Innovativeness	0.979	1.022	14.181
Department	Innovativeness	1.000	1.000	8.511
Specialty department	Ethnic1	0.858	1.116	2.719
	Innovativeness	0.928	1.078	3.801
	Age	0.663	1.509	6.158
	Ethnic conscious	0.896	1.117	11.766
	Marital status	0.714	1.401	20.222
Specialty store	Innovativeness	1.000	1.000	8.511
Catalogue	Gender	1.000	1.000	2.722
	Education	1.000	1.000	6.183