THE IMPACT OF NUMERIC SUB-BRANDING ON SINGAPOREAN CHINESE CONSUMERS: A CONJOINT ANALYSIS

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ABSTRACT

It has been argued that the demand for a product is largely dependent on price and quality (Dodds, Monroe & Grewal, 1991) and that it is possible to provide a global product with a universal brand, as consumers desire reliable and quality products at low prices (Levitt, 1983). As global companies extend their reach around the world and such "global" products become available world wide, it is important for marketers to understand if other factors play a significant role in consumers' purchase processes, especially in Asia where cultural and social influences can be very different from Western societies.

Indeed, prior research has shown cultural roots and superstitious beliefs influence Chinese consumers' perceptions (Wattanavitukul, 2002; Hong, Pecotich & Shultz, 2002; Cadogan, 1999; Ang, 1997). Such influences may impact positively or negatively on a product in ways that are independent of its attributes. Thus, some Asian consumers pay very high prices for products that have particular numbers that are thought to be "lucky," suggesting the value of a product may be determined by more than price (Chintagunta, 2002) and quality in Asian markets.

Since numerology is deeply rooted in Chinese culture, the present study was undertaken to examine the impact that two important numbers (4 and 8) had on Chinese consumers' value perceptions when used in sub-brand extensions. These numbers were chosen as Ang (1997) had noted the numbers represented "death" (4) and "prosperity" (8) in Chinese numerology and,

consequently, may have a negative or positive impact on the value Chinese consumers attach to a product.

While there are many types of products available to consumers and possible juxtapositions of numbers are almost endless, the present study was restricted to examining the impact that the numbers 4 and 8 had on the value Chinese consumers attached to cars and mobile phones to ensure the study was manageable. The study was undertaken in Singapore, but it was hoped that the results could be translated to other Chinese markets so more cost-effective and efficient approaches could be developed for such markets.

CHAPTER 1

INTRODUCTION

SOME BACKGROUND

International business and global trade are not new concepts. Indeed, people, communities and nations have traded since before recorded time. Primitive people used barter systems to trade, the early Greeks had their agoras, the Romans had their forums and, today, there are shopping malls in most countries around the globe; all of which are variations of the market place (Cateora, 1993).

Global business ventures also date back a long way in history, with the British East India Company, a trading firm that was chartered in 1600, being an early example. In the United States, the Singer Sewing Machine was an early successful international venture that, by 1880, had become a worldwide organization with an outstanding foreign sales organisation (Ball & Mcculloch, 1982).

Today, many countries have brands that are exported to other parts of the world and Australia and Singapore are no exceptions. Brands such as Rip Curl (Anonymous, 2005) and Quiksilver (Stecyk, 2005), which began in Torquay in Victoria, are recognised by surfers across the globe. Australia also has many world renowned wine brands, such as Penfolds, Leeuwin Estate and Jacob's Creek, which have led Australia to fourth place as a global wine exporter (Pugh & Fletcher, 2002).

The taste of Singapore's "Old Chang Kee" curry puff is enjoyed in many parts of Southeast Asia, while "Charles and Keith" shoes, a shoe chain started by two Singaporean brothers, are available in many countries (Anonymous, 2005). Creative Technologies is probably Singapore's most famous company as it revolutionised personal computing globally when it introduced SoundBlaster sound cards (Anonymous, 2003), turning traditional computers into multi-media home entertainment units for gaming and video entertainment (Anonymous, 2006).

Global trade contributes significantly to exporting businesses and to the world economy and has become increasingly important to the industrial and economic life of many developed and developing nations. In the absence of effective trade barriers, international trade will take place and, in today's environment, it is less likely that businesses can avoid the influence of internationalisation and globalisation. The challenge is to develop a sustainable competitive edge as globalisation intensifies (Mazzarol & Soutar, 2001; Cateora, 1993).

GLOBALISATION OR LOCALISATION

The rapid growth of technology, particularly in areas of communication and transportation, has led to the increasing internationalisation of business and many new markets have opened to international organisations (Mitchell, 2000). The world has become a potential market for companies willing to venture out of local markets and people talk of global organisations and global brands. The globalisation concept, made popular by Levitt (1983), calls for a homogeneous marketing approach around the world, with the same marketing mix being

employed across the globe (Budd Jr, 2000). Indeed, Levitt (1983, p. 92) argued that the world's markets were moving “toward a converging commonality,” which suggested organisations can and should use the same brand, product and marketing program around the globe.

Such an approach, however, ignores different cultural preferences, tastes and standards as it argues that everyone, everywhere, wants the things he or she has heard about, seen, or experienced, because of the emergence of new technologies, such as the Internet and satellite television. The global approach assumes there are substantial market segments around the world with common needs and that most customers are looking for low prices, high quality and reliable products. If this is true, companies can benefit through reduced production, distribution and marketing costs and, increasing competition, will lead to many of these savings being transferred to consumers, providing them with additional benefits.

Levitt (1983) argued that segmenting international markets on political boundaries or customising products and marketing strategies for country markets, or on the basis of national or regional preferences, would not be cost effective and subsequent research has supported this notion. Tse (1988), for example, found that, in a marketing world characterised by intensive communications, standardisation and the similar decision technologies, cultural differences tend to diminish. Companies that recognise this and adopt a globalised approach are able to gain large economies of scale in all of their activities, which translate into lower prices for consumers and greater profits for organisations (Yip, 1989; Walters, 1986).

Several arguments suggest uniform approaches are possible as consumers' tastes are becoming similar internationally (Elinder, 1965; Fatt, 1964). Consequently, marketing appeals are not limited by national boundaries and international standardisation is possible. Some empirical evidence has supported this view (Peebles & Ryans, 1984; Dunn, 1976). Indeed, some American companies, such as MacDonald's and Disney, have demonstrated that a cohesive global message is possible (Moore & Rugman, 2003). MacDonald's serves a standard menu across the globe, although there are minor regional differences, and their customers expect the same standard of service and quality of food when ordering a "Big Mac" or a "Quarter Pounder" in the United States or Taiwan. Similarly, Mickey Mouse and Donald Duck are immediately recognised and the fundamental themes for Disneyland are the same in Japan, the United States, France and Hong Kong.

While globalisation can offer benefits to businesses and consumers, consumer behaviour does vary from region to region or from country to country and many marketers have recognised the major influence culture has on consumers' behaviour. This impact can be seen, for example, in Campbell Soup's decision to withdraw from the Brazilian market after only three years due to poor sales (Hawkins, Best & Coney, 1992). The familiar red and white label that is so well received in the United States and many other countries was passed over by Brazilian consumers (Anonymous, 1981) because Campbell failed to understand differences in buying behaviour within its intended market (Heiming, 1982). Brazilian women purchasing instant soup were seen as not fulfilling their duties as wives as their husbands expected soup to be made from fresh ingredients. Gerber had a similar experience and also had to withdraw

from the Brazilian market (Anonymous, 1982) as Brazilian women buying instant baby food were not seen to be good mothers (Hawkins et al., 1992). Another example of a common brand not necessarily being universally beneficial can be seen in the Soupline brand name. While one of France's leading laundry detergents, the brand name would not be suitable in English-speaking markets, where the name would have a very different connotation (Dahringer & Muhlbacher, 1991).

Many writers have argued against globalisation (Boddewyn, Soehl & Picard, 1986; Thackray, 1985; Lynch, 1984) and have suggested there is a need to localise strategy, so as to better understand consumers and to cater to individual market needs (Barham & Rassam, 1989; Carlsmith & Aronson, 1963). Such writers have suggested that multinational strategy is likely to be appropriate for only a few products (Lynch, 1984) as adaptation to local needs is necessary to win buyers and maximise sales and profits (Wills, Samli & Jacobs, 1991; Quelch & Hoff 1986). Indeed, many companies have come to recognise the uniqueness of different markets and have adopted different approaches when dealing with each one. For example:

- Coca Cola has a different marketing approach in India from those in other parts of the world (Kripalami & Clifford, 2003).

- Asian consumers drive Alfa 168 motor cars, while the rest of the world drive Alfa 164 motor cars (Harkell, 1999), even though the cars come from the same production line and have the same specifications and features.

- Asian consumers talk on the Siemens 8008 mobile telephone that was specifically named for the Asian market (Anonymous, 2001; 2001), while the same mobile telephone is available to the rest of the world as the Siemens CL50.

While there are many examples of localisation, it is interesting to see the extent to which companies re-brand their products for Asian markets. However, branding or re-branding exercises are time consuming and expensive and some companies may not be able to justify the cost. Well-resourced companies can adopt a preventive approach by ensuring sensitive cultural issues are addressed before introducing a product into a market, but other companies may need to take a reactive approach, making changes only when required.

The latter approach may be expensive, however, and not just in a monetary sense, if there is a need to reposition a product or to recapture lost market share as a result of cultural problems. Indeed, Cateora (1993, p. 101) argued that "successful foreign marketing begins with cultural sensitivity - being attuned to the nuances of culture so that a new culture can be viewed objectively, evaluated and appreciated", but this sensitivity is sometimes forgotten.

As there have been relatively few studies of Asian consumers, Asian markets continue to provide a sense of mystery to many marketers. The complexity multiplies when Asian cultures merge their superstitions, traditions, beliefs and societal norms with external influences from the West. Even more confusion arises because the emphasis on economic development in many Asian

Countries has encouraged the importation of foreign capital, technology and personnel that, inevitably, influence Asian consumers (Wee, 1996).

The advent and easy access of a variety of mass media options, such as television programs, films, magazines and newspapers, have also influenced Asian consumers' attitudes and behaviour and may have changed Asian consumers' outlooks on life. Without empirical evidence, however, many organisations' approaches to Asian markets seem to have been a series of trial-and-error initiatives. Such an approach can be dangerous, as Asian markets are competitive and failures are expensive. It is necessary to investigate the assumptions on which such judgments are based, as marketers must be sensitive to the needs of Chinese consumers if they are to succeed in Asian markets (Wee, 1996).

THE ASIAN MARKET

According to World Bank (2004), East Asia's economies are likely to grow nearly twice as fast as the rest of the world over the next few years (Anonymous, 2004; Fossberg, 2004). The dramatic transformation in these markets over the last ten years has been significant. The region's expansion of more than 6 percent in 2004 was the fastest since the global slowdown began in 2000. East Asia's growth rate is high, especially given a forecast of 3.7 percent growth globally (Anonymous, 2004). The opening up of what were once closed economies, such as China and Vietnam, and the lifting of many trade barriers in most Asian economies have also made Asia a more attractive market. With nearly two billion consumers and a market potential of

approximately US$2 trillion (Hong et al., 2002), Asia is a market that cannot be ignored, even if it is not understood.

Chinese consumers are the largest single cultural group in Asia and live across Asia, with concentrations in countries such as China, Hong Kong, Singapore and Taiwan. There are also significant Chinese consumer markets in Indonesia, the Philippines, Thailand, Malaysia and Vietnam, while China alone has a market of 1.3 billion Chinese consumers (Anonymous, 2002). Clearly, Chinese consumers are of particular importance to marketers involved in most Asian economies and we need to understand more about their consumer behaviour.

BRANDING IN ASIA

As branding is an important part of the marketing mix, whether a globalisation or a localisation strategy is used, it is important to know how globalising or localising a brand is likely to affect sales. Branding a product is essential to ensure the intended perceived value is attached to the brand, as perceived value provides the basis for consumers' willingness to buy and purchase decisions (Sweeney, Soutar & Johnson, 1999; Dodds et al., 1991; Zeithaml, 1988).

While many studies have examined a variety of branding issues, very few have been undertaken with Asian participants (Marshall, 1996) and none of these few studies have examined the impact Chinese superstitions have on consumption behaviour. According to Cateora (1993, p.106), this may be an important issue as "superstition plays a larger role in [Chinese] society's belief

systems" than it does in many other belief systems. While some people may view an issue as mere superstition, others may consider it to be a critical aspect of their culture.

Branding may be more complicated in Asia, especially among the Chinese, because of variations in dialects, religions, traditions, superstitions and societal norms. A good example of a marketing mistake resulting from a misunderstanding about Asian superstitions and cultural values can be seen in an English cigarette maker's (John Player) decision to launch a product in Hong Kong. The company introduced the new cigarette in a distinctive black box during the Chinese New Year period, hoping to capture market share from the market's leading brand (Marlboro). The result was disastrous because many Chinese associate the colour black with bad luck and bad fortune. The timing of the launch made matters worse as the Chinese New Year is a time when people are in a happy, festive mood and are especially sensitive to the negative connotations of the colour black (Dahringer & Muhlbacher, 1991).

While understanding Chinese culture is difficult, the complexity is increased when Chinese consumers are influenced by Western values. Easy access to information in the present technology age, the ready availability of the Western media and Western colonial influences in many Asian countries have meant that many Western ideas have been accepted, displacing Chinese customs or creating conflict with Chinese traditions (Cateora, 1993). While languages, religions, superstition, taboos, culture and beliefs are intertwined in Chinese society, it is important for marketers to understand Chinese consumers' buying behaviour drivers to ensure marketing efforts are appropriate and that they do

not create unintended consequences, such as those John Player found in their Hong Kong product launch.

Superstition is embedded in Chinese culture and many Chinese consumers are willing to spend large amounts of money on products that will "bring them good fortune." Thus Arrowanas (Dragon fish) and Flowerhorns (Luohan fish) are sold for several thousands dollars (Arshad, 2003) in Chinese markets with rare species going as high as fifty thousand dollars (Chang, 2004), while a Singaporean family paid more than S$100,000 for a “lion-head” dog in 1993 (Wee, 1996).

Numbers also have an important role in Chinese superstition (Loh, 2004). Numerology, or a belief in the significance of numbers, is a part of Chinese culture and it is common for Chinese people to associate the number 8 with prosperity or good fortune and the number 4 with death (Wattanavitukul, 2002; Chou, 2002; Ang, 1997; Lip, 1992). Chinese people have a tendency to draw meaning and associations from similar sounding words (Ang, 1997), which can be a challenge for marketers as there are many homophones in the Chinese language (Tavassoli & Han, 2002).

Knowing how numbers are interpreted is only part of the answer, however, because it is also important to understand how such interpretations influence decision making. Understanding these drivers should help marketers develop strategies that can be better aimed at Chinese consumers and determine whether Levitt’s (1983) global approach will work, or whether a localised approach is needed. The present study was undertaken to obtain such an

understanding and, in particular, to see whether the numbers used within a brand impacted on Chinese consumers.

NUMBERS AND BRANDS

Before discussing these issues, however, two definitions are needed as they are important to the present study, namely:

1. A master brand is a brand that dominates consumers' minds (Farquhar, Han, Herr & Ijiri, 1992) and is used to position a variety of generally related products (e.g., Fiat, Nokia or Toyota).

2. A sub-brand is the name or number added to a master brand to differentiate these products and is likely to be used if the master brand is itself credible, reputable and well recognized (Bhat & Reddy, 2001; Kirmani, Sood & Bridges, 1999; Milberg, Park & Mccarthy, 1997; Boush & Loken, 1991; Tauber, 1988) (e.g. Fiat 124, Nokia 8810 or Toyota Camry).

As already noted, the Western media, including the Internet, have impacted on Asian consumers (Wee, 1996). With the rapid advancement of technology and the speed of information transfer, knowledge about alpha-numeric brands is easily available to any consumer across the globe through the Internet with just a few clicks from a mouse. Gone are the days when a buyer-seller relationship is confined to store premises or is barricaded by mountains or oceans. The modern consumer can be anybody in the world who has a recognised credit card and Internet access. Therefore it is important to understand the meanings attached to numeric sub-brand extensions and their impact on Chinese

consumer purchase decision processes if marketers intend such products to reach Asian markets.

While brand and sub-brand extensions are common in many markets, numeric sub-brand extensions are more common and are generally associated with technical or technology-driven products. Technology organisations often use alpha-numeric sub-brand extensions to differentiate their many models or to mark improvements over an earlier model (e.g., the Siemens SL45, the Alfa 168 and the Nokia 8810). Consumers' recognition of such sub-brand extensions is almost instantaneous, sometimes to the extent that a product is identified only by its sub-brand numeric extension. For example, a consumer might say; "Is that a T610 or a T630?" rather than "Is that a Sony Ericsson T610 or a Sony Ericsson T630?" Consequently, the impact of numbers in brand names is likely to be greater in such markets. Thus, while any product could have been chosen for inclusion in the present study, it was important to establish a set of appropriate criteria to make a choice of these products. In order to ensure numbered sub-brands were relevant, potential products had to have the following characteristics:

- Such products had to be available in the Singapore market because the study was undertaken in Singapore, as is noted subsequently.

- Singaporeans had to be able to identify the product immediately.

- Singaporeans had to be able to envision using the product and be able to associate themselves with the product.

- The product could be personalised numerically.

- The product should commonly have an alpha-numeric sub-brand extension.
- There should be some variation in the price charged for the product.
- The product must be able to have some variation in design.
- The product must offer a variety of features.

A product that fitted these criteria was the mobile telephone. The growth of mobile telephone use in Asia has been significant. On a per capita basis, countries such as Hong Kong and Singapore rank among highest in the world in terms of mobile phone ownership (Wee, 1996). Singaporean households have become more affluent in recent years and have increased their ownership of consumer durables in general, but there has been a particularly significant increase in mobile phone ownership (Ng & Yap, 2001). Indeed eighty-five percent of Singaporean households had at least one mobile phone in 2002, compared to six percent in 1992 (Ng, 2003). Such a high ownership rate allows any Singaporean to immediately identify and associate with a mobile phone, with a very high probability that they have either used or have owned such a phone.

Singaporeans' increased income has also meant that many products that were once considered luxuries are now deemed to be essential. The motor car fits this description. Cars have doubled in numbers in Asia during the last ten years (Wee, 1996). In Bangkok, for example, car numbers increased from 450,000 in 1977 to 900,000 in 1987 and reached two million in 1990. In Taipei,

the number of cars reached 1.9 million in 1990. The same is true for many other Asian cities, such as Beijing, Shanghai and Kuala Lumpur (Wee, 1996).

Singapore is one of the most expensive places in the world to own a car. While the car-to-population ratio in Singapore is significantly lower than other global cities, such as London, New York and Tokyo, Singaporeans continue to want to own cars because of their convenience, flexibility and the social status they bring. Commuting to work by car increased by 6% from 1990 to 2000 (Census, 2001) and car ownership is increasingly viewed as a necessity by middle and upper-middle income families. The proportion of people who wish to own a car has grown over time, as education levels rise and people begin to benchmark their lifestyle options against global standards (Census, 2000). Thus, while car ownership may not be as high as in many other cities, most Singaporeans aspire to own a car and many non-car owners know a great deal about cars, suggesting most Singaporeans readily identify with cars.

As already noted, mobile phone ownership was once a sign of affluence in Singapore, but has become a necessity, while car ownership continues to be a goal for most Singaporeans. It is clear that these two products are integrated into Singaporean society and it was decided to include these two products in the present study.

Understanding how physical and psychological attributes are considered in consumer decision making is important. Physical attributes are generally required to ensure a product's primary function is carried out efficiently and effectively. In the case of a car, it must be able to move safely from point A to point B. This requires a motor, a transmission, and other physical features. A

car's physical functionality is expected by any consumer making such a purchase and is generally the same in all cultures. However, a car also has a bundle of psychological features that are as important in providing consumer satisfaction, as are the car's physical features. These features have little to do with the physical functions and may vary from culture to culture. The colour, size and brand may add value, as may a license plate number or model number, at least in Asia.

On the other hand, a mobile phone's physical function allows a user to communicate with other people, while a phone's psychological aspects may include its design, phone number, model number and features. In short, a product is the sum of the physical and psychological satisfaction it provides to the user.

Both the car and the mobile phone allow personalising options in addition to standard model numbers, prices, features and design components and these options have been linked to Chinese paying high prices for personalised lucky numbers (Anonymous, 2004; Loh, 2004; Anonymous, 2001). Indeed, it has been suggested that such options are a vital part of conspicuous consumption as they provide egoistic value that generate substantial price premiums (Wee, 1996). The personalisation of a car license plate or of a mobile phone number in Singapore is obtained through an auction bidding process determined by relevant governing authorities. Therefore, given there is the option of various numeric combinations, the nature of the two products and the conspicuous and egoistic consumption behaviour of Chinese consumers (Eckhardt & Houston,

2002), the present study provided interesting insights into the impact numbers have on Chinese consumer behaviour.

The meaning and value imputed to a product's psychological attributes may vary even within culture and may be perceived as negative or positive. The present study also attempted to help understand whether specific product attributes impacted negatively or positively on Chinese consumers' value perceptions by including a number of other attributes (e.g. price and design) in the study. As noted earlier to ensure the study's manageability, only the numbers 4, 8 and some other "marker" numbers were included and applied to model numbers and license plate or telephone numbers as required.

THE SIGNIFICANCE OF THE PRESENT STUDY

As already noted, Asia is a very significant and attractive market, with many Asian markets experiencing an influx of foreign investment and the distribution of global brands. Global companies venturing into Asia bring with them products and brands that have been successful in their home markets. While some of these companies approach Asian markets without localising or re-branding products (Impe, 2001), others have taken a more cautious approach and re-branded products to avoid conflicts with local cultural or superstitious beliefs (Tydecks, 1997; Robyn, 1997).

Many studies have examined perceived value, branding and globalisation, while a few studies have examined Asian beliefs, superstitions and branding and even numbers (Marshall, 1996). However, no previous research has examined how numeric superstitions and beliefs affect consumers' value

perceptions, which ultimately affect their purchase decisions. As branding and re-branding decisions in Asia seem to be based on hearsay and "gut feel", rather than empirical evidence, the present study should provide valuable insight into this issue.

Thus, the main purpose of the present study was to investigate the value Chinese consumers attach to the number 8 and the number 4. However, as Chinese consumers have been affected by a number of Western influences, a number of further issues were examined and discussed in detail in Chapter 3, namely:

- Are better-educated Chinese consumers less influenced by numeric issues?
- Are Chinese consumers with higher levels of income less influenced by numeric issues?
- Are Chinese consumers who have different religious beliefs (Christian or traditional beliefs) influenced differently by numeric issues?

THE PRESENT STUDY'S OBJECTIVES

In the previous section, the background and significance of the present study were discussed. The present section discusses how the research topic was developed to ensure that the study was manageable and outlines the study's research questions and objectives. While Chinese people live around the world, the present study focused on Singapore for four reasons, namely:

1. Singapore has a large Chinese Population – Seventy-seven per cent of the resident population is Chinese (which is significant enough for marketers to take appropriate action).

2. There is a large immigrant Chinese Population – Approximately 15 per cent of Singapore's Chinese were born outside Singapore, with their origins in Malaysia, Hong Kong and China. Consequently, the study provided insights into these other Asian countries.

3. The spoken language – Mandarin and Cantonese are commonly spoken languages in Singapore and meanings are often drawn from numbers in these two languages.

4. Manageability – Singapore provided an understanding of the Chinese consumer within the required time frame and within the study's financial resources.

Given these issues, the present study was undertaken in Singapore and attempted to:

- Explore how Chinese consumers' traded off attributes for two technical products, namely cars and mobile phones.

- Determine whether superstitions and beliefs influenced these trade-offs.

- Verify whether religion and education affected these superstition and beliefs.

- Explore if age and spoken language affected these superstition and beliefs.
- Examine the marketing implication of the results for Chinese markets.
- Examine price is the key determinant in the purchase decisions.

The present chapter provided some background to the study and discussed its significance. In Chapter Two, the literature review discusses previous research and similar studies and shows how the present study extends an earlier study by Ang (1997). Following this, Chapter Three discusses the research approach used to achieve the study's objectives, while the results obtained are examined in Chapter Four and the conclusions are provided in Chapter Five. The study's limitations and directions for future research are discussed in Chapter Six and a summary of the focus group findings are provided in Appendix I.

CHAPTER 2

A LITERATURE REVIEW

The previous Chapter outlined the present study's expectations and discussed the research questions it attempted to answer. The present Chapter examines relevant prior research and provides a theoretical framework for the study. The Chapter begins with an overview of Levitt's seminal article on globalisation, discussing the drivers for globalisation and provides some counter arguments that suggest the need for localisation. The Chapter then provides some background about Chinese society, its beliefs and a summary of Singapore's Chinese demography.

GLOBALISATION

Levitt's (1983) popularised the notion that the world's needs and desires had been irrevocably homogenised and that consumers in all markets wanted similar products and features, regardless of country, culture or society. He argued that the future belonged to the globally-oriented corporation because technology was homogenising the world and because people around the world were growing more alike in their wants and behaviours. The rapid homogenisation of the world's wants and wishes was thought to be driven by what Levitt (1983, p. 23) termed "the Republic of Technology", whose "supreme law" was convergence, leading to a "tendency for everything to become more like everything else."

If this notion is true, the world can be seen as a single market, rather than as a number of segments, or uniquely national markets. No consumer can be insulated and people everywhere want the things they have heard about, seen, or experienced, resulting in the emergence of global markets for globally standardised products and services. Levitt (1983) argued that it was now possible to sell homogeneous products across international boundaries, cultures, nationalities, races, religions, moral values, heritage and customs. Different cultural preferences, national tastes and standards and business institutions were no longer thought to be points for consideration and were merely vestiges of the past.

In business, these trends can be translated into global markets, with global corporations selling the same products in the same way everywhere. If companies operate in increasingly homogeneous global markets, Levitt (1983) argued they should standardise production and marketing programs to obtain economies of scale and cost leadership (Solberg, 1997; Yip, 1989; Walters, 1986). The amount of time, money and resources saved by taking such an approach was thought to be large, leading to increased profitability as the need to customise or localise was no longer relevant.

In summary, while Levitt (1983) acknowledged the importance of differences between nations and cultures, he argued that companies should globalise because the cost savings were more important in an increasingly homogenised world. His argument rested on the two premises, namely:

1. Consumers will accept homogenised products.

2. Consumers are willing to sacrifice nation-specific preferences for low prices and reliable and high quality products. Thus, inherited preferences and practices will no longer affect "global" consumers.

It was argued that, as globalisation had become a reality (Szymanski, Bharadwaj & Varadarajan, 1993; Yip, 1989; Levitt, 1983), consumers were now able to choose from a large number of foreign, as well as domestic brands (Ming, 2002). As a result, companies remoulded themselves into “global” companies selling global brands in an attempt to seize business opportunities anywhere in the world. Countries that led the globalisation race included the United States of America and Japan and their leading companies reach and influence almost every country in the world (Barham & Rassam, 1989). Many multi-national companies, such as Procter and Gamble, Heinz, Kimberly Clark, Nestle, Unilever and Electrolux, have revamped their organizational structures to tap into the opportunities offered outside their home market (Mitchell, 2000). While some of the factors that Levitt (1983) discussed have influenced such decisions, several other factors have also led to the globalisation push, as is discussed in the next section.

Globalisation drivers

Several factors have supported the globalisation push. Firstly, there has been a worldwide trend towards deregulation and privatisation that has made the world a bigger market (Mitchell, 2000). Further, the liberalisation of many

governments' policies and more positive attitudes towards foreign investment in both developed and developing nations have made market access easier and less risky (Ball & Mcculloch, 1982). Finally, many previously closed economies, such as China, Vietnam and Russia, have opened their markets to foreign organisations, providing additional markets for global players.

Many mature home markets have also become overcrowded by competition or by changes in consumer purchase patterns. Companies facing stagnant or saturated home markets are under increasing pressure to find new markets (Ball & Mcculloch, 1982). Non-viable home markets have forced many companies to react and search beyond traditional geographical boundaries for new business (Fellman, 1998). Markets with large populations, minimal competition and low barriers to entry are the most appealing to such businesses. That is why countries such as China and India, with populations of about 1.3 billion (Anonymous, 2002) and 1.0 billion respectively, are extremely attractive (Anonymous, 2004). When the Chinese economy opened itself to foreign organisations (low barriers to entry) it attracted many multi-national companies offering products and expertise not previously available (minimal competition) as they saw potentially significant consumption within the local market (because of the large population).

New information and communication technologies are also making the "world a smaller place" and communication and organisation on a global scale can be cost effective in this environment. The availability of modern technology has made information transfer rapid and affordable. Global communications is

increasingly an everyday matter, creating the preconditions, and the need, for global brands.

Popular brands created for home markets are no longer confined to one market but, with the right marketing mix, can become global brands. With the speed of present technology, messages and branding can spread quickly and easily through a variety of media sources, such as the Internet or satellite television (Fellman, 1998). The vector of technology has helped shape people's preferences (Levitt, 1983) and people's on-going exposure to global communications has also created the preconditions for, and a need for, global brands (Mitchell, 2000).

Finally, organizations that "go global" can reap large benefits from obtaining global economies-of-scale (Mitchell, 2000; Solberg, 1997; Levitt, 1983). Tapping into a larger market, as the globe certainly is, can reduce unit production and marketing costs if a single global strategy is undertaken.

Although the benefits of globalisation have been well-discussed, some companies create and market global brands, not because consumers want them, but through internally focused, financially-driven or operations-driven motivations. On the other hand, consumers may not want global brands just because they are global but, rather, because they are of better value or because they deliver better performance than do local brands. Whether perceived or real, global brands provide consumers with confidence, reducing their risk (Jain, 1989) and increasing their value (Sweeney et al., 1999).

Globalisation may also offer economies of scale, bringing down unit production and marketing costs so products can be offered at better prices. Since price is likely to be a major factor in many buying decisions, cost leadership is likely to impact significantly on long-term organisational performance (Levitt 1983). However, a homogeneous product does not always guarantee success when sold in different markets as there may be cultural challenges (Barham & Rassam, 1989) when some consumers look beyond low prices (Sweeney et al., 1999; Carlsmith & Aronson, 1963) to a “feel-good” factor, “peace of mind” or an “ego booster”, which is often found in brands and sub-brands. The failure of ‘New Formula Coke” is a good example of not recognising symbolic value or emotional involvement (the “feel good” factor) (Hartley, 1995). The “feel good factor”, or “peace of mind”, may be a product that is perceived to be lucky and an “ego booster” may be a product that has well-known value, such as a Rolex watch.

The number of people in such segments will vary across countries and according to the way value is calculated. In this study, several examples were given to highlight that globalizing a brand may some times result in adverse consumer reaction due to underlying cultural factors. The marketing challenge remains how to accommodate local market differences and preferences within a global strategy that delivers as many global economies of scale as possible to enable cost leadership.

BRANDING

This thesis explores the relationship between numeric sub-branding and its impact on Chinese consumers. Therefore, it is important to first understand the objective of branding, and how sub-branding may either strengthen or weaken the masterbrand.

Brands are powerful symbols that reflect the image organisations want to project (Eckhardt & Houston, 2002). They are tools companies use to build and maintain customer loyalty (Klein, 2001). Brand image is a vital part of any company's marketing program because it serves as a foundation for tactical marketing mix decisions (Ming, 2002) and it plays an integral role in building long-term brand equity (Keller, 1993; Park, Milberg & Lawson, 1991; Aaker & Keller, 1990). Brand image is often built on consumers' brand associations and has been identified as an integral component of brand equity (Ming, 2002; Aaker, 1996; Agarwal & Rao, 1996; Feldwick, 1996; Park & Srinivasan, 1994; Keller, 1993; Srivastava & Shocker, 1991).

Developing effective brands facilitates consumer recall and creates a positive image and attitude toward a product (Keller, 1993; Aaker & Keller, 1990). Effective brand names include desirable qualities, such as simplicity, distinctiveness, positive associations (Robertson, 1989), sound, spelling and meaning (Ang, 1997). Therefore, understanding brand image is crucial for marketers developing appropriate marketing strategies.

Popular brands encourage sales. Consumers have a tendency to purchase products of brands with which they are familiar with and which they trust. A

well-trusted brand enables premium prices to be charged and higher volumes to be sold (Heberden, 2002). Subconsciously, these brands provide the confidence consumers seek in products. Studies have shown that branding has a significant effect on perceived value (Hong et al., 2002), the price that can be charged (Donoho & Nelson, 1989) and purchase intentions (Dodds et al., 1991). Companies that successfully incorporate visual identity and relevant attributes into their brands can differentiate their offerings from other suppliers as consumers attach value to that identity (Heberden, 2002). Identical products with different brands are accepted and valued differently by consumers.

Indeed, strong brands have the power to persuade customers to purchase one product over another (Court, Freeling, Leiter & Parsons, 1996) and strong positive brand associations can command significant price premiums (Agarwal & Teas, 2001). A product with a more acceptable brand is able to command a higher price. For example, a similar collar shirt sells for ten times the price at Polo Ralph Lauren boutiques than it does at Baleno outlets. The only difference may lie in the branding of the shirts. An established brand is often worth more than the value of the product itself (Court et al., 1996), explaining why products with established names command prices that are many times the cost of production (Agarwal & Teas, 2001).

Master brands are easily identified and are strongly associated with a product category, use situation, product attribute or consumer benefit (Leong, Ang & Laiu, 1997) For example, Nokia is immediately associated with telecommunication or mobile phones, while Mercedes Benz is immediately identified as a luxury car. Sub-branding is a derivative of brand extension,

commonly defined as using a brand from one category to introduce products into a totally new category or product class [Aaker, 1990 #151[Tauber, 1988 #65. Brand extensions and sub-branding, which take advantage of such brands, have become a popular brand strategy that uses the strength of a master brand to create immediate brand equity (Kirmani et al., 1999; Aaker & Keller, 1990; Tauber, 1988). Many researches have also found that the usage of an existing brand in a new product category is to leverage off the strength of the core brands such as the brand's reputation, quality, technology expertise, symbol of prestige and image [Aaker, 1990 #151[Bhat, 2001 #225[Boush, 1991 #226[Park, 1991 #153[Farquhar, 1992 #27[Tauber, 1988 #65] Such sub-branding must be done with extreme caution, however, as, while a successful sub-branding extension reinforces a strong master brand, a failed sub-branding extension can dilute the master brand's value (Leong et al., 1997).

Many brands are available across the globe. While Levitt (1983) argued that the world would accept a homogeneous product because technology dilutes and dissolves ideology, making it "sub-lingual" and "trans-lingual", this may not be always be so. Societies are made up of people and their cultures and it is impossible to discuss one without relating to the other. Culture encompasses people's beliefs, rules, techniques, institutions and artefacts (Ball & Mcculloch, 1982) (Terpstra & Sarathy, 1994). While the concept of culture is broad, cultural anthropologists have identified folklore, attitudes and beliefs, religion, material culture, education, language and social organisation as some of culture's key components. Cultural factors are crucial when considering segmenting global markets, as they are a prime determinant of consumers' attitudes, behaviours and lifestyles (Jain, 1989). Culture can transform global meaning into unique

local meanings (Belk, 1996) and, if this happens, consumers from different markets can perceive brands differently. Therefore, companies competing in or contemplating competing in multiple national markets must develop an understanding of their target markets and the characteristics that will affect their brand's meaning (Ming, 2002).

While numeric sub-brands are made up of numbers that do not carry literal meaning (Ang, 1997), model numbers are intentionally used as sub-brand extensions in Asia to entice and influence a purchase or to create brand awareness (e.g. Siemens 8008 and Alfa 168) (Simmons, 1979). While the numbers may be abbreviations for a proper name, inventory code numbers or symbols of a product's technicality (Boyd, 1985), Chinese consumers often attached meaning to the numbers themselves (Ang, 1997). A failure to comprehend such associations may create problems if it leads to consumers avoiding the product, as was the case when the Alfa 164 was introduced in Asia. Using numbers in a sub-brand extension has become common, especially for technologically-advanced products such as mobile phones (Nokia 8810), cars (BMW 728), video cameras (JVC DVL 800), computers (DELL 8200) and so on (Ang, 1997; Boyd, 1985). However, given their potential impact, marketers must determine whether the same numbers are appropriate in all target markets (Motameni & Shahrokhi, 1998).

Most theories about brands have been developed from survey and experimental data gathered in the United States and, to a lesser extent, in Europe, although the results obtained have been included in textbooks that are

used all over the world (Marshall, 1996). Prior internationally-oriented brand research has:

- Tried to understand brand image's dimensionality across international markets and to see how cohesive brand image is in the global market (Ming, 2002).
- Examined the effects of master brand extensions (Leong et al., 1997).
- Examined the relationship between foreign brand name translations and product related cues in East and Southeast Asia (Hong et al., 2002).
- Looked at auditory and visual brand identifiers in Chinese and English (Tavassoli & Han, 2002).
- Investigated Chinese consumers' perceptions of alpha-numeric brand names (Ang, 1997).
- Examined good life images and brand name association (Zinkhan & Prenshaw, 1994).
- Looked at the distortion of product information during decision-making processes (Russo, Meloy & Medvec, 1998; Russo, Medvec & Meloy, 1996).
- Examined the implications of global brands (Mitchell, 2000).
- Investigated the impact cultural values have on brand meanings (Eckhardt & Houston, 2002).

- Looked at consumers' perceptions of perceived quality, sacrifice, risk and product value (Agarwal & Teas, 2001).

- Examined the relationship between perceived risk, quality and value (Sweeney et al., 1999).

Although some of these studies looked at globalisation, branding, sub-brand extensions and even Asian consumers, they did not explore the impact that brand extension numbers might have on Chinese consumer's decision-making processes.

Aesthetics, linguistics and superstition influence branding (Schmitt & Pan, 1994), and Ang (1997) highlighted two conflicting principles that affect the impact brand names might have on product success. The Juliet Principle, based on Shakespeare's Romeo and Juliet, argues that what "we call a rose, by any other name would smell as sweet," suggesting brand names do not influence consumers' perceptions (Collins, 1997). In contrast, the Joyce Principle argues that brand names have linguistic qualities that distinguish them from other names and impute qualities about the product (Ang, 1997). This literature review argues in favour of the Joyce Principle, as numbers do seem to have different connotations for Chinese consumers.

Because brand names are linguistic labels that are subject to structural differences between language systems (Pan & Schmitt, 1995), Western branding studies may not be relevant in Asian markets that are influenced by Chinese superstitions and beliefs. There are likely to be subtle, but important, cross-cultural differences in brand name perceptions (Ang, 1997) and,

therefore, there is a need to explore the impact Chinese superstitions and beliefs have on Chinese consumers. Branding in Asia is important, as Chinese consumers place more emphasis on the social value of brands than do Westerners (Tse, 1996).

Language is a key to culture (Ball & Mcculloch, 1982) and is central to branding, creating brand associations and marketing communication as branding is concerned with the associations people draw from the verbal labels linked to a brand (Tavassoli & Han, 2002). Spoken languages differentiate cultures, just as physical barriers do (Ball & Mcculloch, 1982). In Chinese society, there is additional complexity because there are variations between spoken dialects that have created sub-cultures. Thus, when brands are translated into character-based Chinese dialects, variations in the perception of meaning can occur (Hong et al., 2002), which explains why the idiosyncrasies of a dialect group (such as the Cantonese, Hokkien or Teochew) may not be obvious to other dialect groups.

The Chinese language has approximately 400 syllables and about 1,300 tones that create a large number of homophones, or words that sound the same but have different meanings (Tavassoli & Han, 2002; Wattanavitukul, 2002). Examples of homophones in the English language are “so”, “sew” and “sow”. Each word sounds the same but has a different meaning (Tavassoli & Han, 2002). Similarly, within Chinese dialects, numbers are often imputed to have meanings as a result of homonyms. For example, the number “2,” when expressed in Cantonese has the same pronunciation as the word “easy,” while the number “4” sounds like “death” (Lip, 1992). Thus, the Cantonese often

associate “24” with “easy death”. The Chinese perception of the number “4” is comparable to the Western avoidance of the unlucky number “13.” The use of numbers, or associating numbers with one’s destiny, is popular among the Chinese (Lip, 1992). A good example of how a homophone is used to an advantage in a Chinese culture is when the Chinese character “fu” (prosperity) is intentionally placed upside down. The word “upside down” is expressed in the same manner as the word “cometh” or “dao” in Mandarin. The intention of placing the word “fu” upside down is to have “prosperity coming one’s way” or “prosperity cometh” (literally). Sometimes, images of bats are seen in Chinese ornaments and artefacts for the same reason since the word “bats” is similar to “fu” (prosperity) in Chinese. Therefore, it is also common to see inverted images of the bat in Chinese households, not because the bat is in its natural state upside down, but because the owners hope that “prosperity” will come to the house.

Subtle variations may be important, as previous research has found that brands have a significant impact on consumers’ perceptions of the quality of a product, the price they are willing to pay and their purchase intentions (Hong et al., 2002). It is every marketer's constant challenge to influence purchase intentions. Thus, knowing when and where to ignore local differences is one of modern marketing’s great skills. It is a perennial challenge for global marketers to find a common platform in such a way that product specifications, packaging, brand name and advertising work well in every market.

Consumer behaviour may not always be rational or easily anticipated. Sometimes, consumer animosity is divorced from a consideration of product quality (Ettenson & Klein, 2000) and the pre-decisional distortion of products is unrelated to product performance (Russo et al., 1996). The New Formula Coke was developed based on what Coke drinkers wanted for taste, but the product was not accepted when available.

Sometimes, consumers may avoid a product because of experience or superstition. The poor acceptance of the Alfa 164 in Asia was a case of consumer superstition, despite it being a very good car. On the other hand, there may be a "halo effect" (Russo et al., 1998) in consumers' overall evaluations, influencing them to purchase to the point where a price premium is paid (Heberden, 2002; Agarwal & Teas, 2001; Court et al., 1996).

The approach some global telecommunication companies take to markets is interesting. Siemens adopted a global strategy in the past by marketing the same mobile phones across the globe, with models bearing the same alpha-numeric sub-brand extensions, such as Siemens SL45 and Siemens S40, even though number "4" was considered taboo in Asia. Whether coincidental or not, these models did not sell as well as expected (Impe, 2001). In the recent years, however, Siemens has incorporated the number "8" in their range of mobile phones and launched a Siemens 8008 for the Asian market. Nokia and Ericsson, on the other hand, took Asian consumers' sensitivity towards the number "4" into account by eliminating the number from all of their products. Indeed, both brands do not have the "4" series marketed in any part of the world (Impe, 2001).

Branding and re-branding are costly exercises. Some companies spend large amounts of money to re-brand their products to cater for Asian consumers. When the luxurious Alfa 164 was introduced, it was an important model for Alfa Romeo in a market niche dominated by the S-class Mercedes sedans and the BMW 7-series sedans. Sales in Asia were surprisingly low, despite considerable interest and enthusiasm generated for the car. As “4” depicts “death” and “164” translate to “death all the way”, no one wanted an unlucky emblem on the rear of their car.

Alfa Romeo had to rename the car model from the “Alfa 164” to the “Alfa 168” for Asian markets (Harkell, 1999; Tydecks, 1997; Robyn, 1997; Wee, 1997) as “8” depicts prosperity for Chinese, suggesting that the Alfa 168 signifies “prosperity all the way” (Anonymous, 2003). What was originally a bad rear insignia became one of the best. The Alfa 168 is marketed only in Asian markets, while the rest of the world drives the Alfa 164. This mistake was a costly one for Alfa Romeo in all aspects (money and time spent on re-branding and the initial loss of market share). This suggests Chinese consumers do attach different meanings to different numbers, with Chinese consumers forming their own interpretation of a product as a result of numeric brand extensions.

Sub-branding strategy can affect a master brand positively or negatively (Milberg et al., 1997) and, in the case of Alfa Romeo, the sub-brand extension had a negative impact on the master brand. Other car manufacturers have also had their woes with the number “4”. Perhaps not surprisingly, the Porsche 924 (“easy death”) and the Porsche 944 (“double death”) are extremely rare in

Cantonese speaking regions (Tydecks, 1997). The perceived risk that Chinese consumers attached to these cars were the possible ill fate that may come to them and, therefore, most of them adopted a “prevention is better than cure” attitude by not purchasing the product.

Numbers have been deeply rooted in Chinese culture for many centuries and must be taken more seriously (Lip, 1992). Given the evidence available from the market place, it is important to consider Chinese purchase decision processes when developing marketing strategy in Chinese-influenced markets. By efficiently satisfying the needs of such consumers, companies will have a chance of continuing profitability. However, if these needs are not recognised or understood, the company may reduce its potential profitability (Marshall, 1996).

CHINESE NUMEROLOGY & SUPERSTITION

Superstitious behaviour is not only a Chinese phenomena as it is found in many consumer domains (Gallup & Newport, 1991) and can lead to the purchase of particular products, such as lucky charms that are thought to bring good luck (Mowen & Carlson, 2003). Elaborate rituals may also be created, even though they may have no influence on a particular outcome. As an example, consumers may not delete chain e-letters because of the promise of misfortune if they fail to pass them on (Vyse, 1997).

Many studies have examined superstition and the list of superstitious beliefs and behaviours is virtually limitless (Mowen & Carlson, 2003), with different cultures, ethnic groups and nationalities having different lists. Prior research

has found that, while consumers may claim not to be superstitious, their actions prove otherwise. The explanation is that such behaviours are so embedded in culture that actions are not considered superstitious or that there is a hesitancy to admit being superstitious for fear of being branded ignorant or primitive (Gallup & Newport, 1991).

According to Longman's (Longman, , p. 351) English Dictionary, superstition is an "unreasonable belief based on old ideas about luck" that is often the result of fear or ignorance. This is true in the present context as many Chinese superstitions have been passed from one generation to another and, often later generations have no idea how the superstition originated. Indeed, Chinese people's concern with fortune and luck is well-documented. Thus, when contemplating the symbolic impact of a brand in Asia, prudent marketers need to probe folklores, taboos and superstitions and religions to understand the connotations colours, numbers and symbols may have (Ang, 1997).

Culture and society foster superstitious beliefs and behaviours (Rudski, 2001; Ninness & Ninness, 1998; Skinner, 1992) and numbers are an important part of Chinese consumers' cultural heritage. Numerals and numerical use are regarded as important and significant because numbers are believed to be closely associated with the cosmological system that influences one's fortune (Lip, 1992).

To the Chinese, numbers are not just figures as they carry significance and symbolism. The Chinese believe numbers represent the direction and orientation that affects one's well-being (Ang, 1997). Chinese numerology is associated with "feng shui" (literally translated as "wind and water")

(Anonymous, 2000) or geomancy (Kotler, Ang, Leong & Tan, 1999), which has a strong religious origin in Taoism (Ball & Mcculloch, 1982). Chinese geomancy makes use of natural forces and orientations to bring about good fortune and draws a balance between the “ying” and the “yang,” or positive and negative energy. Geomancy also allows a person to activate auspicious numbers and dissolve inauspicious numbers (Too, 1997).

While there are several schools of Chinese numerology, it is generally accepted that the two extremes in Chinese numerology are the number 4 and number 8 (Impe, 2001; Ang, 1997; Too, 1997; Lip, 1992). Juxtaposed with other selected numerals, these two numbers create auspicious or inauspicious meanings. Therefore, the Chinese do not assess numbers based on any scientific method but, rather, on the basis of homonymy and sound (Lip, 1992).

Each permutation of numbers may carry implication and symbolism (Ang, 1997) based on how the numbers are read. A string of numbers may affect Chinese consumers depending on the perceived value or the risk they attach to the numbers. A series of numbers that does not have any meaning (for example 3521) is unlikely to influence behaviour. However, numbers that imply ill fortune are perceived to have risks and are often shunned (for example, 164 that sounds like “death all the way”), while a string of numbers that has an auspicious association will have better perceived value and may be highly sought after (for example, 168 that sounds like “prosperity all the way”).

PERCEIVED VALUE AND PERCEIVED RISK

Many researchers have examined the value construct, but often it has been labelled with a different name. Even with different terms, the concept remains the same. Some of the terms include consumption value (Sheth, Newman & Gross, 1991), consumer value (Holbrook, 1994) (Sweeney & Soutar, 2001), customer value (Holbrook, 1998), perceived value (Sweeney, Soutar & Johnson, 1997; Chang & Wildt, 1994; Dodds et al., 1991; Zeithaml, 1988), acquisition and transaction value (Grewal, Monroe & Krishnan, 1998) and value for money (Ashworth & Johnson, 1996). Perceived value is a consumer's collective answer to the marketer's question as to how much a product is worth to a consumer (Gershman, 1990). The greater consumers perceive a product's value to be, the more willing they will be to make the purchase.

Perceived risk has also been studied (Sweeney et al., 1999), although risk has often been seen as embedded in the perceived value construct itself (Holbrook, 1994; Bolton & Drew, 1991). Perceived value is often considered a consumer's overall perception of a product that weighs the sacrifices and benefits derived from the product (Zeithaml, 1988). Thus, consumers will not pay for value they do not perceive, no matter how real it is, while, alternatively, consumers will pay for what they perceive to be good value, no matter how unreal it is (Porter, 1985). There is, however, a thin line between perception and reality (Gershman, 1990), although, from a marketer's perspective, the only reality is in the minds of the consumer (Newell, 1997; Reis & Trout, 1994). When consumers make a purchase, they take a gamble and hope the product delivers satisfaction over time (Sweeney et al., 1999). When risk perceptions

are high and impact on value, marketers must understand how risk perceptions are determined and ensure perceived risk is minimised.

Ang (1997) noted that superstition plays a role in attaching value, or risk, to numbers and found that, for Chinese consumers, the number 4 and number 8 had the greatest impact as 8 added value and 4 added risk. Thus, just as many American hotels eliminate the unlucky thirteenth floor (Johoda, 1969); the fourth and fourteenth floors are often omitted in Asia (Wattanavitukul, 2002; Chou, 2002). Chinese consumers try not to live in an apartment on the fourth or the fourteenth floor as they wish to avoid bereavement or bad luck. Therefore, when Chinese consumers purchase a product, they are likely to take a risk that their purchase will meet their expectations, while minimising or reducing the psychological discomfort (Elliot & Devine, 1994; Carlsmith & Aronson, 1963) that may be linked with anxiety (Hunt, 1970) or uncertainty or doubt (Montgomery & Barnes, 1993; Menasco & Hawkins, 1978).

As was already noted, Chinese consumers often equate the number 4 with misfortune, including death (Anonymous, 1997), while equating the number 8 with good fortune. Car license plates bearing the number 8 are worth a great deal of money, and properties with the number 8 are able to command premium prices. In China, for example, Sichuan Airlines bid for and obtained the telephone number ‘8888-8888 in China's Sichuan Province’s capital for 2.33 million Yuan (US$282,000) (Chinadaily, 2003). This telephone number only fetched such a high price because it had great significance. Indeed, eight digits of eight are regarded as “continuous prosperity” and highly priced in Chinese society (Anonymous, 2004; Loh, 2004). Interestingly, other lucky

numbers were also available in this auction, in which a 100 phone numbers that included combinations of special numbers, such as "8", "6" and "9", were sold for a total of 7.13 million Yuan (US$859,000) (Anonymous, 2003).

While quality and price are generally acknowledged as major antecedents to value (Sweeney et al., 1997; Levitt, 1983), no one has examined the trade-offs between numbers and other potential value drivers, even in Chinese markets in which numbers in a brand may impact on perceived value or perceived risk. Do Chinese consumers view these numbers as “good or bad luck” independently, or do perceptions follow the numbers and attach themselves to the products they represent? Consumers differentiate products by assessing a relevant set of attributes (Svenson, 1992) and then tend to purchase the product that offer them the greatest value (Sweeney et al., 1997; Zeithaml, 1988), while avoiding products that create unacceptable risks (Bauer, 1960). Thus, companies can succeed by understanding their customers’ value equation (Goodman, 1999) and giving them offerings that are “valuable” (Clemmer, 1990).

Chinese consumers may not only want global brands because global economies of scale enable companies to offer better quality products at lower prices as some commentators have suggested (Mitchell, 2000; Solberg, 1997; Levitt, 1983), but also because the perceived value of such products provides them with “peace of mind” and a “feel good” factor (Sweeney, Hausknecht & Soutar, 2000; Rosenfeld, Kennedy & Giacalone, 1986). For example, telecommunication companies and car registration authorities in many Asian countries charge extra for each number “8” in a telephone number or on a car

license plate (Wattanavitukul, 2002). In Singapore, mobile phone operators pay large amount of money to purchase numbers from the local authority so that they are able to issue such “lucky numbers” in the hope of making money and gaining market share. For example, SingTel paid the Infocomm Development Authority of Singapore (IDA) $155,000 for numbers starting with 9888-XXXX, while M1 paid $104,500 and $100,000 for the numbers 8222-XXXX and 8188-XXXX respectively (Loh, 2004). Interestingly, numbers determine Taipei’s bus system as the Bureau of Transportation decides on a number for the route only after the path has been mapped out (Chou, 2002).

Houses, in Chinese-dominant countries, with a “4” in their address fetch lower prices (Cadogan, 1999). In some buildings, such as Motorola Singapore, the 3rd - 4th and 13th - 14th floors have been replaced with a 3a - 3b floor and a 13a - 13b floor. Sometimes, floor levels may even go from the 12th floor to the 15th floor, taking account of both Western and Asian superstitions (Wattanavitukul, 2002; Chou, 2002). There is clearly a risk that some numbers will create negative perceptions (Heberden, 2002) and Chinese consumers tend to take a preventive approach by avoiding the possibility of misfortune from the beginning. From the evidence presented so far, it seems that marketers need to take account of Chinese consumers' concerns about different numbers.

THE CHINESE MARKET

The importance of the Chinese market was discussed briefly in Chapter One and it was clear that Chinese consumers have a significant impact in many parts of Asia, but particularly in East and South East Asia. The East Asian and

Southeast Asian region is a market of nearly 2 billion consumers, of which China makes up more than a half, with many cultures and languages and a gross domestic product of approximately US$2 trillion (Hong et al., 2002).

As there have been rapid changes in Chinese dominant countries, such as Hong Kong, China, Taiwan and Singapore, these societies may have developed different cultural values. With the availability of information, the advancement of technology and the accessibility of air travel, many of today's Chinese are exposed to a variety of other cultures, are better educated and are more influenced by the West. Indeed, most Singaporean Chinese are at least first or second-generation immigrants from China who, through British influence, have undergone some degree of cultural change, although the extent of such a change will have been influenced by the cultural resilience of the person or family and by that person's education (Hong et al., 2002).

It was also anticipated that numbers would have different impacts in different Chinese dialect groups as they read numbers in a different manner and numbers are, therefore, interpreted differently. Chinese with a strong Cantonese influence are the most superstitious about numbers, as is evident in Hong Kong (Anonymous, 2005), Guangzhou and most parts of Southern China. Northern China does not display such behaviours as much. As Cantonese or Cantonese speakers tend to be more superstitious, it is likely households that converse mainly in Cantonese, regardless of their dialect group, will be more superstitious. This is clearly seen in countries such as Hong Kong, where the Chinese population is made up of different dialect

groups, but the main language used in business, as well as in daily conversation, is Cantonese.

With all the idiosyncrasies of Chinese markets, the need to draw a balance has made some companies create global products but have an “act local” strategy. The rationale for such an approach is that each market situation is unique and the key to “think global but act local” (Wills et al., 1991; Barham & Rassam, 1989) is to standardise strategic elements that can be standardised without significant harm (or with efficiency benefits) and let the elements that have different effects in different countries or culture vary (Farley & Lehmann, 2001). Often this is easier said than done because of economic, political and internal company constraints and conflicts. Companies with sufficient resources and an understanding of the need to localise are in a better position than their counterparts. This approach allows companies to be sensitive to local market differences, while enjoying economies of scale if they are available.

Chinese Beliefs

Marketers have often identified culture as an important consideration when developing marketing strategy. Culture includes beliefs, attitudes, goals and values held by most people in the society, as well as the characteristic behaviours, rules, customs and norms that most people follow (Peter & Olson, 1993). Each society establishes its own meanings that often form cultural distinctions, such as the way the Chinese associate numbers with different outcomes, as shown in Table 2.1 and interpret a number's auspiciousness according to how numbers sound. Symbolism is an important aspect of Chinese culture and numbers make up some of its most important symbols

(Chou, 2002), suggesting numbers are likely to influence Chinese consumers' behaviour.

TABLE 2.1: The Interpretation of some Numbers by Chinese Dialect Groups*

NUMBER	MEANING DERIVED (DIALECTS INTERPRETATION)	COUNTRY / CITY IN WHICH APPLICABLE
1	Definite (Cantonese / Mandarin)	China / Hong Kong / Singapore/ Malaysia / Taiwan
2	Easy (Cantonese)	Hong Kong / Guangzhou / Shenzhen / Singapore / Malaysia
3	Life (Cantonese) / Mountain (Mandarin) / Shirt (Hokkien / Teochew)	China / Hong Kong / Singapore/ Malaysia / Taiwan
4	Death (Cantonese / Mandarin / Hokkien / Teochew)	China / Hong Kong / Singapore/ Malaysia / Taiwan
6	Road / Route (Cantonese)	Hong Kong / Guangzhou / Shenzhen / Singapore / Malaysia
8	Prosper (Cantonese / Mandarin)	China / Hong Kong / Singapore/ Malaysia / Taiwan
9	Longevity (Cantonese / Mandarin)	China / Hong Kong / Singapore/ Malaysia / Taiwan
10	Death (Mandarin) Definite (Cantonese / Mandarin)	China / Hong Kong / Singapore/ Malaysia / Taiwan
13	Definite life (Cantonese)	Hong Kong / Guangzhou / Shenzhen / Singapore / Malaysia
14	Definite death (Cantonese)	Hong Kong / Guangzhou / Shenzhen / Singapore / Malaysia
18	Definite prosperity (Cantonese / Mandarin)	China / Hong Kong / Singapore/ Malaysia / Taiwan
24	Easy Death (Cantonese / Mandarin / Hokkien / Teochew)	China / Hong Kong / Singapore/ Malaysia / Taiwan
28	Easy Prosperity (Cantonese / Mandarin / Hokkien / Teochew)	China / Hong Kong / Singapore/ Malaysia / Taiwan

NUMBER	MEANING DERIVED (DIALECTS INTERPRETATION)	COUNTRY / CITY IN WHICH APPLICABLE
44	Double Death (Cantonese / Mandarin / Hokkien / Teochew)	China / Hong Kong / Singapore/ Malaysia / Taiwan
48	Continuously prosper (Cantonese / Mandarin)	China / Hong Kong / Singapore/ Malaysia / Taiwan
54	No death (Cantonese / Mandarin)	China / Hong Kong / Singapore/ Malaysia / Taiwan
58	No prosperity (Cantonese / Mandarin)	China / Hong Kong / Singapore/ Malaysia / Taiwan
74	Definite Death (Cantonese)	Hong Kong / Guangzhou / Shenzhen / Singapore / Malaysia
99	Double Longevity (Cantonese / Mandarin)	China / Hong Kong / Singapore/ Malaysia / Taiwan
162	Easy path ahead (Cantonese)	Hong Kong / Guangzhou / Shenzhen / Singapore / Malaysia
164	Death all the way (Cantonese / Mandarin)	China / Hong Kong / Singapore/ Malaysia / Taiwan
168	Prosperity ahead (Cantonese / Mandarin)	China / Hong Kong / Singapore/ Malaysia / Taiwan
1868	Once prosper, then prosper all the way (Cantonese / Mandarin)	China / Hong Kong / Singapore/ Malaysia / Taiwan
5354	Neither here nor there (Cantonese / Mandarin)	China / Hong Kong / Singapore/ Malaysia / Taiwan
6818	Once prosper, then prosper all the way (Cantonese / Mandarin)	China / Hong Kong / Singapore/ Malaysia / Taiwan
7456	Angry to death (Mandarin)	China / Singapore/ Malaysia / Taiwan
7788	Almost complete (Cantonese / Mandarin)	China / Hong Kong / Singapore/ Malaysia / Taiwan
9413	High probability of death [90% chance of death vs. 10% of survival] (Cantonese / Mandarin)	China / Hong Kong / Singapore/ Malaysia / Taiwan

* These numbers were taken from various sources (Chen, 1998; Tydecks, 1997; Ang, 1997; Too, 1997; Lip, 1992) and from the focus groups undertaken as part of the present study.

As an example of the importance attached to numbers, the Bank of China in Hong Kong opened its doors on the eight day of August 1988 (or 8/8/88 in the day/month/year format) because it was considered to be the luckiest day of the Century. The Hong Kong Stock Exchange once closed its index at 11,888 at the end of December so Chinese investors would view this as a sign of further prosperity and good fortune in the New Year. Even Hong Kong Disneyland had much “Feng Shui” influences in the park’s orientation and the official opening date (Ng, 2005). In Singapore, the Treasury Departments of most banks are located on the eighth or eighteenth floors (Ang, 1997). Even the official date when Prime Minister Goh Chok Tong handed over his premiership to Deputy Prime Minister Lee Hsien Loong was carefully chosen to avoid dates that Singaporeans might see as inauspicious (Anonymous, 2004). Clearly, in Chinese cultures, people obtain perceived value and risk from numbers.

Such superstitions are often related to Asian religions as many Chinese have their ancient belief system rooted in Confucianism and Taoism, but many of today's Chinese have inter-mingled such beliefs with Western ideologies, especially when considering consumption, consumerism and brands (Eckhardt & Houston, 2002). The symbolic impacts of brand naming in Asia are often intertwined with folklore, taboos and superstitious and religious connotations. Research has found that the sound, spelling and meaning of a brand can affect consumers’ decisions and, although brand names often do not carry literal meanings, consumers impute a meaning to them (Ang, 1997).

THE SINGAPORE CHINESE CONSUMER

The focus of the present study was on Singaporean Chinese consumers. As was noted in Chapter One, Singapore was chosen for several reasons, especially since Singapore has a large Chinese group (77% of the population) and about 15 per cent of Chinese residents in Singapore were born outside Singapore, with origins in Malaysia, Hong Kong or China and the key spoken Chinese languages are Mandarin and Cantonese. The following section provides a detail analysis of the Singapore population and its demography for this study.

Singapore's Population

Singapore's population in June 2000, when the last census was taken, was 4,017,733 (Census, 2000). As can be seen in Table 2.2, non-residents were responsible for almost half of the population increase during the previous decade. The non-resident population (excluding tourists and transients) includes foreign workers, students and other foreigners who are not permanent residents. The non-resident population grew much more rapidly than the resident population (Singapore citizens and permanent residents) as it recorded a 9.3 per cent per annum increase, compared to a 1.8 per cent per annum increase for residents, which was boosted by an increase in the number of permanent residents (with a 10 per cent increase per annum). Singapore citizens increased at a modest rate of 1.3 per cent per annum (Census, 2000).

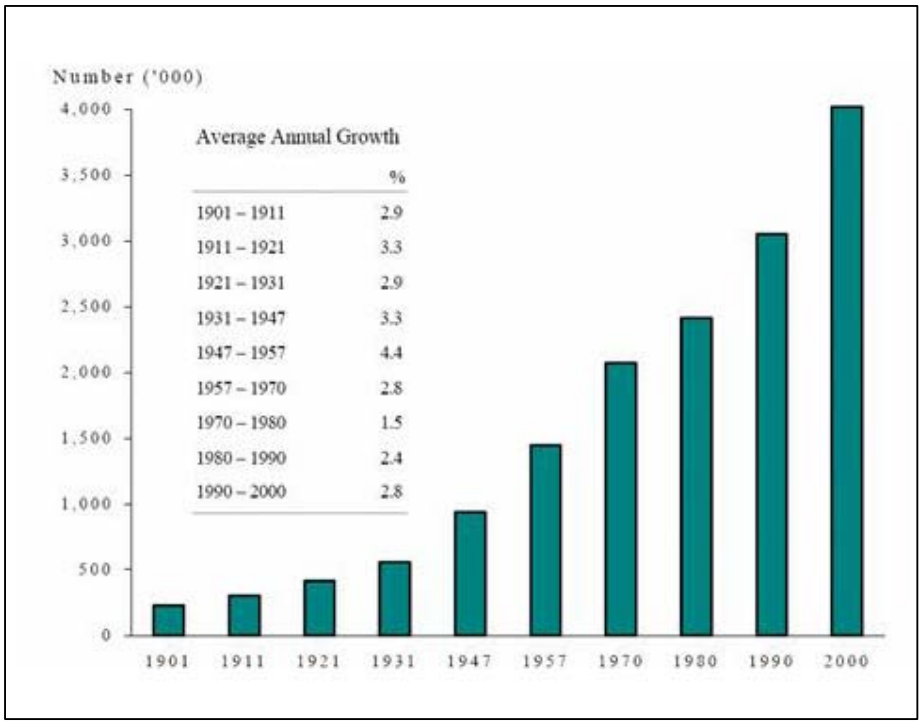

FIGURE 2.1: Singapore's Population
Source: Singapore Department of Statistics 2000a

Given the large inflows of foreigners into Singapore, it is not surprising that the non-resident population accounted for 19 percent of the population in 2000. Permanent residents accounted for 7 percent of the population, while Singapore citizens accounted for 74 percent in 2000, compared to 86 per cent in 1990.

Although Singapore's population had a steady growth over the decade (as can be seen in Figure 2.1), immigrants from neighbouring Chinese communities made up a large percentage of the resident population. These Chinese immigrants brought their cultural roots (Tsu, 1986), beliefs and idiosyncrasies, which were of particular interest to the present study.

TABLE 2.2: Total population by residential status

RESIDENTIAL STATUS	NUMBER		PERCENT		AVERAGE ANNUAL GROWTH
	1990	2000	1990	2000	1990-2000
Total Population	**3,047,132**	**4,017,733**	**100.0**	**100.0**	**2.8**
Resident Population	**2,735,868**	**3,263,209**	**89.8**	**81.2**	**1.8**
Citizen	**2,623,736**	**2,973,091**	**86.1**	**74.0**	**1.3**
Permanent Residents	**112,132**	**290,118**	**3.7**	**7.2**	**10.0**
Non-Residents	**311,264**	**754,524**	**10.2**	**18.8**	**9.3**

Source: Singapore Department of Statistics (2000)

Singapore Chinese Ethnic Groups

Singapore society is made up of a number of different ethnic groups, with Chinese ethnics making up about 77% of the country's resident population, having their origins in China and Southeast Asia (Lee, 2001). The Chinese in Singapore are a relatively heterogeneous population, with more than 20 dialect groups, although Hokkien, Teochew and Cantonese are the main groups.

Figure 2.2 shows the dialect group breakdown. The Hokkiens numbered about one million in 2000 and remained the biggest group by dialect origin. The Teochews and Cantonese were the next two largest groups, with 526,000 and 386,000 people respectively. Collectively, the three dialect groups made up three-quarters of Singapore's Chinese population. The remaining one-quarter belonged to one of at least 19 other dialect groups in Singapore (Lee, 2001).

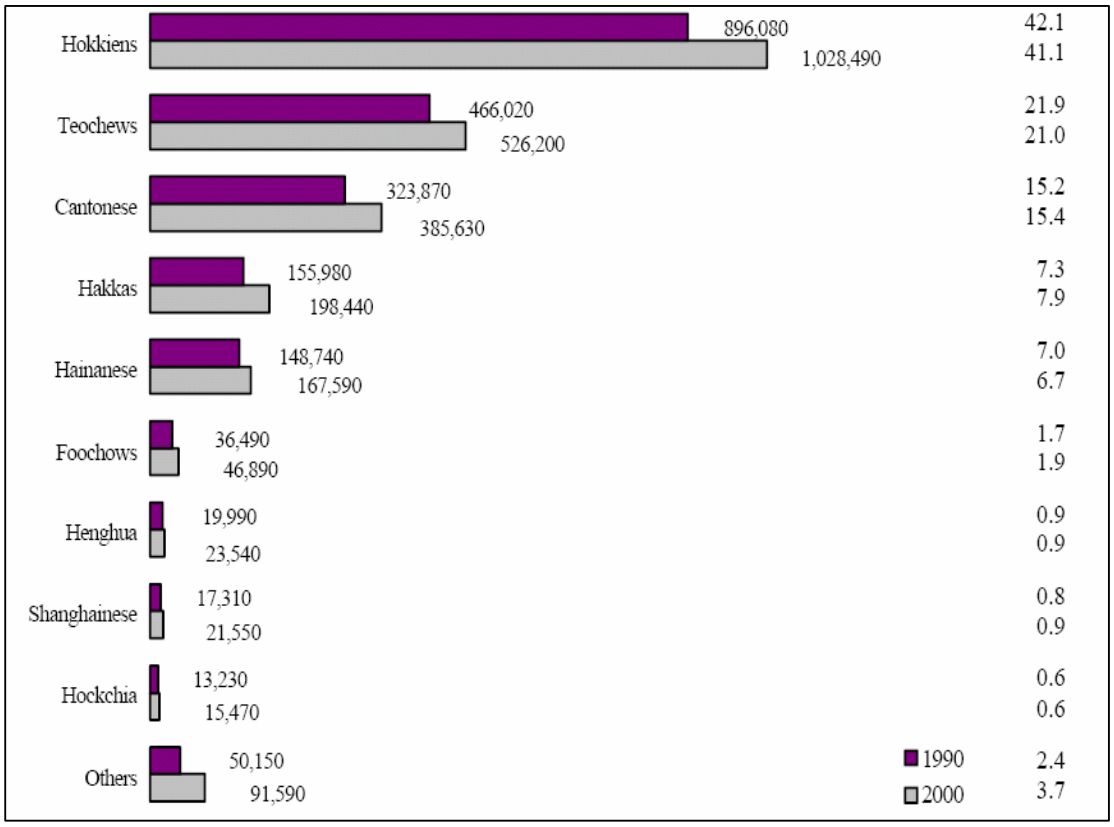

FIGURE 2.2: Chinese population by dialect group
Source: Singapore Department of Statistics (2000)

Immigrants made up a large proportion of the Cantonese community and proportionately more Cantonese were born outside Singapore (22 percent compared to 12 percent for the other two main dialect groups), with even a quarter of the younger Cantonese (aged from 25 to 39 years) born outside Singapore. The bulk of the Cantonese immigrants were born in Malaysia, Hong Kong and China, as can be seen in Table 2.3.

TABLE 2.3: Country of birth of the main Chinese dialect groups

COUNTRY	HOKKIENS		TEOCHEWS		CANTONESE	
	1990	2000	1990	2000	1990	2000

Born in Singapore	89.7	88.2	86.9	87.9	80.5	78.0
Born outside Singapore	10.3	11.8	13.1	12.1	19.5	22.0
Malaysia	5.3	7.8	4.5	6.2	9.5	12.7
Hong Kong	0.0	0.1	8.1	0.1	1.1	3.5
China	4.0	2.6	7.7	4.6	8.2	4.7
Other Countries	1.0	1.3	8.9	1.2	0.7	1.1
Age of people born outside Singapore						
15 – 24	2.0	4.4	1.6	2.8	4.0	11.6
25 – 39	7.8	14.1	6.7	10.3	13.6	25.1
40 – 54	16.8	12.9	19.1	12.3	23.9	23.3
55 & over	37.0	25.9	56.2	35.3	55.1	38.2

Source: Singapore Department of Statistics (2000)

Singapore's Chinese consumers are likely to be influenced by Chinese cultures from neighbouring countries. Consequently, Singapore's Chinese consumers may provide insights into how Chinese consumers in other countries might behave.

Languages Spoken

From Table 2.1 and many of the examples provided in Chapters One and Two, it is clear that numeric associations to superstitions are very common in a Mandarin and Cantonese speaking communities. The use of Chinese dialects as a home language is no longer a distinguishing feature of the Chinese dialect groups. Table 2.4 suggests that Mandarin has replaced many Chinese dialects as the most commonly used home language, except for Cantonese (Lee, 2001). The strong retention of the Cantonese dialect is partly due to the high proportion of Cantonese born in Malaysia or Hong Kong, where Cantonese is still commonly used (Lee, 2001; Census, 2000).

TABLE 2.4: Language most frequently spoken at home (Chinese residents)

HOME LANGUAGE	NUMBER ('000)		PERCENT		CHANGE
	1990	2000	1990	2000	(%)
Total	1,884.0	2,236.1	100.0	100.0	18.7
English	363.4	533.9	19.3	23.9	46.9
Mandarin	566.2	1,008.5	30.1	45.1	78.1
Chinese Dialects	948.1	685.8	50.3	30.7	-27.7
Others	6.4	7.9	0.3	0.4	23.4

Source: Singapore Department of Statistics (2000)

Mandarin is a commonly understood language (as can be seen in Figure 2.3) as it is taught as a Second Language in schools and tertiary institutions. This is

also a reflection of the bilingual education and official encouragement (Capon & Vanhonacker, 1999) to speak Mandarin instead of dialects (Census, 2000). Mandarin has also been the official Chinese language for media broadcasting, such as television and radio (Anonymous, 2001), since the introduction of the "Speak Mandarin" campaign in 1979 (Tan, 1986).

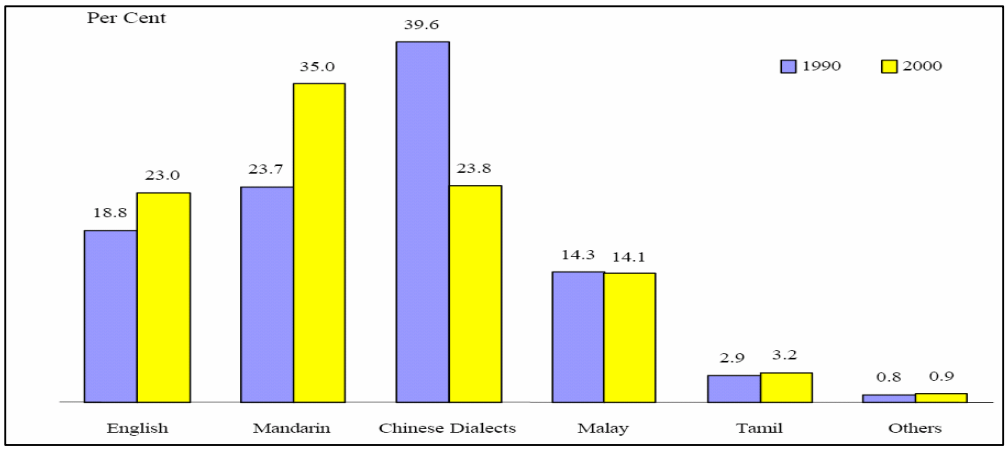

FIGURE 2.3: Languages most frequently spoken at home (resident population)
Source: Singapore Department of Statistics (2000)

The Cantonese are the only dialect group that has retained its dialect as a home language, as can be seen in Table 2.5.

TABLE 2.5: Language spoken at home - main Chinese dialect groups

HOME LANGUAGE	HOKKIENS		TEOCHEWS		CANTONESE	
	1990	2000	1990	2000	1990	2000
English	17.6	21.8	19.6	24.6	22.9	28.4
Mandarin	29.5	46.3	28.4	43.4	20.2	32.0
Own Dialect	48.5	29.0	42.8	25.7	51.5	36.2
Others	4.4	2.9	9.1	6.3	5.5	3.4

Source: Singapore Department of Statistics (2000)

In 2000, some thirty-six percent of the Cantonese group spoke Cantonese most frequently at home, which was higher than the proportion speaking Mandarin (32 percent) or English (28 percent). In contrast, proportionately more Hokkiens and Teochews spoke Mandarin than spoke their own dialect.

In general, Singaporean Chinese are very appropriate for the present study as a majority of the Chinese in the community are able to speak and comprehend Cantonese and Mandarin, within which numbers have particular meanings.

Literacy

The general literacy rate among the resident population aged 15 years and over rose from 89 per cent in 1990 to 93 per cent in 2000 (Gordon, 2002) and this increase occurred for all ethnic groups (Census, 2000). From Table 2.6, it can be seen that about 80 percent of the resident Chinese population are literate in Chinese.

TABLE 2.6: Literate resident population aged 15 years & over

ETHNIC GROUP / LANGUAGE IN WHICH LITERATE	1990	2000
Chinese (%)	**100.0**	**100.0**
English	**19.8**	**16.4**
Chinese (Mandarin) Only	**40.6**	**32.0**
English & Chinese (Mandarin) Only	**37.8**	**48.3**
Others	**1.9**	**3.3**

Source: Singapore Department of Statistics (2000).

From Table 2.7, it can be seen that, 82 percent of the literate Chinese were literate in Chinese, while 68 percent were literate in English.

TABLE 2.7: Literacy in languages by ethnic group - Literate residents

OFFICIAL LANGUAGES	TOTAL	CHINESE	MALAY	INDIAN	OTHER
	2000	2000	2000	2000	2000
English	70.9	67.6	79.7	87.0	90.4
Chinese	64.7	82.2	0.3	0.7	5.9
Malay	16.8	2.8	97.3	24.9	26.8
Tamil	3.8	0.0	0.1	51.3	0.30

Source: Singapore Department of Statistics (2000).

Education

In general, the proportion of the population who speak English increases with educational qualifications. Among university graduates, forty-seven percent of the Chinese spoke English most frequently at home. For those with primary or secondary education, Mandarin tended to be the most common language spoken at home. Chinese dialects continued to be used predominantly by Chinese residents who have no formal educational qualifications (Census, 2000).

In 2000, fifty-seven percent of the resident non-student population aged 15 years and over had secondary or higher educational qualifications and twelve percent of the population had university qualifications. Two factors contributed to these percentages as more residents were attaining higher qualifications and there was an in-flow of well-educated permanent residents (Census, 2000).

TABLE 2.8: Highest educational qualification attained

HIGHEST QUALIFICATION ATTAINED	SINGAPORE RESIDENTS		CITIZENS		PERMANENT RESIDENTS	
	1990	2000	1990	2000	1990	2000
No Qualification	31.3	19.6	31.5	20.9	27.2	7.5
Primary	27.0	23.1	26.8	23.6	30.9	17.6
Secondary	26.5	24.6	27.0	25.3	16.7	18.5
Upper Secondary	7.3	14.9	7.3	14.5	7.1	18.4
Polytechnic	3.5	6.2	3.4	6.3	3.8	5.2
University	4.5	11.7	4.0	9.5	14.2	32.7

Source: Singapore Department of Statistics (2000)

Religion

TABLE 2.9: Religion - Resident population aged 15 years and over

RELIGION	NUMBER			PERCENT (%)		
	1980	1990	2000	1980	1990	2000
Total	1,640,078	2,078,842	2,494,630	100	100	100
Christianity	165,586	264,881	364,087	10	13	15
Buddhism	443,517	647,859	1,060,662	27	31	42
Taoism	492,044	465,150	212,344	30	22	8
Islam	258,122	317,937	371,660	16	15	15
Hinduism	58,917	77,789	99,904	4	4	4
Other Religion	8,971	11,604	15,879	1	1	1
No Religion	212,921	293,622	370,094	13	14	15

Source: Singapore Department of Statistics (2000)

While Confucianism, Taoism and Buddhism were part of the early heritage of the Chinese in Singapore (Tan, 1986), Confucianism did not emerge as a strong religion in Singapore, although Confucianism is offered as an optional subject in schools under the compulsory religious knowledge program. Table 2.9 shows Buddhism and Taoism, which are traditional Chinese religions, were practiced by 51 per cent of the resident population. The main shift has been from Taoism to Buddhism. The shift towards Christianity was largely due to better-educated Chinese being more inclined towards Christianity.

From Table 2.10, it can be seen that 17 percent of the Chinese practiced Christianity in 2000, while the Chinese also accounted for the bulk of those reporting “no religion” (nineteen percent). Christianity is more common among university graduates, with one out of three graduates being a Christian, while Buddhism attracted a sizeable group of followers from all levels of education, particularly among those with below secondary qualifications (Census, 2000).

TABLE 2.10: Chinese population aged 15 years and over by religion

ETHNIC GROUP/RELIGION	1980	1990	2000
Chinese	**100**	**100**	**100**
Christianity	**11**	**14**	**16**
Buddhism	**34**	**39**	**54**
Taoism	**38**	**28**	**10**
Other Religion	**0**	**0**	**1**
No Religion	**16**	**17.7**	**19**

Source: Singapore Department of Statistics (2000)

Cultural factors, as measured through people's home language, have a strong influence on the religious affiliation of the resident population. Singaporean residents who have adopted English as their home language appear to have had greater exposure to the influence of Christianity (Census, 2000). Christians are the largest group among the English-speaking population, while Buddhism and Taoism, the traditional Chinese religions, are the main religions of the Mandarin and dialect-speaking populations (Anonymous, 2002).

The Singaporean Chinese consumer market offered several opportunities for the present study. A large percentage of the Chinese population still practise Buddhism and Taoism, which are often rooted in superstition (Eckhardt & Houston, 2002). Christianity, although not the largest group, seems to have captured the educated and English-speaking population. Interestingly, Christianity contradicts many superstitions and ancient Chinese beliefs and Chinese numeric homophones are not associated with English words.

From the literature review, the following section defines the hypotheses for this study.

THE RESEARCH HYPOTHESES

The present study examined the impact of sub-brand numbering on Singaporean Chinese consumers value perceptions. As noted in the previous chapters, the number 8 was expected to have a positive impact, while the number 4 was expected to have a negative impact. Therefore, the present study explored the impact of the numbers 4 and 8.

As perceptions might vary by age groups or other demographic factors (Gershman, 1990), it was also important to see whether this was true in the present context, which gave rise to a number of secondary hypotheses that are outlined subsequently.

The Basic Hypotheses

H1: The presence of the number 8 in a product's sub-brand will have a positive impact on value perceptions.

H2: The presence of the number 4 in a product's sub-brand will have a negative impact on value perceptions.

The basic hypotheses seek to confirm the many documented behaviours and common practices among Chinese. A positive finding will prove that much more work is required in this area to ensure a more comprehensive understanding is achieved.

The Secondary Hypotheses

H3: More superstitious people will attach greater importance to sub-brand numbering

Consumers hold superstitious beliefs in the hope they can influence fate and superstitious Chinese will be more conscious of numeric associations (Ang, 1997; Lip, 1992). They will try to ensure they have "lucky" numbers and try to avoid "unlucky" ones (Wattanavitukul, 2002). Thus, the findings for this hypothesis will determine the relationship between superstition and numbers.

H4: Older people will attach greater importance to sub-brand numbering.

The aim of this hypothesis was to determine if age was a determining factor in the perception of numbers. Prior research has found a variety of results involving age. Vyse (1997) found no identifiable relationship between age and superstition, but others have found that older people are more superstitious (Mowen & Carlson, 2003). In the Asian context, however, older generation Chinese tend to be less exposed to Western influences and are more likely to hold onto traditional cultural practices, suggesting numbers are likely to be more important to them than to younger consumers.

H5: Less educated people will attach greater importance to sub-brand numbering.

Education forms the basis for providing a rational explanation to the world (Hong et al., 2002). There is also evidence that, as formal education increases, the likelihood of scepticism increases (Vyse, 1997; Frazer, 1941). Thus, findings will confirm if better-educated Chinese are likely to approach value perceptions differently to less educated consumers and to attach less importance to numbers when making such decisions.

H6: People who do not speak English as their usual home language will attach greater importance to sub-brand numbering.

Language is associated with education and English is the common choice of language for better-educated families (Lee, 2001). The family unit forms the basis of cultural influence and an English-speaking family will influence the younger generation differently from a Chinese-speaking family. Since the association numbers have with good or bad luck are often found in dialects (Tavassoli & Han, 2002; Wattanavitukul, 2002), the result will confirm if non-English speaking consumers are likely to place greater importance on sub-brand numbering.

H7: Chinese who are Christians will attach less importance to sub-branding numbering

Christianity and Chinese traditions contradict one another in many areas. The negative association can be expected because of the long antagonism between Christian belief systems and superstition (Robbins, 1997). The manifestation of Christian belief will be negatively associated with the development of superstitious beliefs (Mowen & Carlson, 2003). Thus, a Chinese Christian is often torn between religion and tradition. The findings will provide greater insight as to how a Chinese Christian juggles between religion and tradition; whether tradition is foregone because of Christianity or traditions are fused into Christianity.

H8: Women will attach greater importance to sub-branding numbering

The initial qualitative research, which is discussed in Appendix I, suggested that women were more concerned about numbers. Interestingly, other

researchers have suggested that women are more superstitious than men (Mowen & Carlson, 2003; Gallup & Newport, 1991), suggesting there may be gender differences. Therefore, the result will provide a better understand if Chinese women are more concerned about numbers than Chinese men.

SUMMARY

The globalisation - localisation debate can be seen as a “chicken-and-egg” dilemma. To achieve increased production, demand must exist. Ignoring cultural sensitivities may create customer animosity and, subsequently, result in avoidance. Re-branding is often a very expensive and time-consuming exercise. Thus, there is a need to get it right the first time. Researchers have established that Chinese consumers impute meaning to numbers (Ang, 1997). Consequently, an important question to whether specific numbers, when applied as part of the product’s brand, affect a product’s perceived value. Do some numbers make the product more desirable and allow it to command a premium price? Do some numbers cause consumers to avoid the product because of the negative connotations attached to that number? Are product and numbers isolated and do consumers make what might be termed "rational judgments" in their purchase decisions?

While evidence suggests Chinese consumers are likely to avoid the number 4, there are instances when consumers have purchased products with the number “4” in their sub-brand extension. The Audi A4, for example, is a popular car among Singaporean Chinese. Are the Singaporean Chinese consumers who made such purchases not bothered by the ill fate that might await them? Were there other reasons that influenced their buying behaviour

that was different to the stereotyped numerically-conscious Chinese? Since Chinese consumers who believe in Confucianism and Taoism are more likely to be superstitious, will Chinese consumers with other beliefs react in a similar manner? Will more educated Chinese be affected differently to those who are less educated?

There are still questions left to be answered, with many inconsistencies in consumer behaviour visible throughout the market place. The meaning attached to a brand by consumers seems to be malleable and sometimes paradoxical in societies where cultural norms are in flux. Prior research has suggested that the meaning attached to a brand name at any moment is largely dependent on the cultural values evoked in a specific use or evaluation situation (Zinkhan & Prenshaw, 1994). This suggests an effort is needed to find out how a brand image reacts with different cultures and whether the meaning taken by a brand is different to the meaning inherent in an organisation's marketing strategy (Eckhardt & Houston, 2002).

The literature review suggested the need for the present study by exploring a number of relevant prior research studies and examining the attributes that seem to influence Chinese consumers. The research questions were derived from the literature review based on some of these factors. In the next chapter, the approach taken to find answers to the questions raised is discussed.

CHAPTER 3

RESEARCH METHOD USED

In Chapter Two, a number of previous studies, as well as relevant comments, findings and views were discussed. The Chapter also outlined the need to better understand how Chinese consumers interpret numbers in their decision making processes, which resulted in the research questions being defined. In this Chapter, conjoint analysis is suggested as a way to provide such an interpretation and its advantages are reviewed. The following section provides a brief introduction of conjoint analysis, its objective, assumptions made, relevance of conjoint analysis to this study and the rationale for choosing this research method. The research approach undertaken is then discussed, with a particular emphasis being placed on the development of the questionnaire and the approach taken to ensure success.

CONJOINT ANALYSIS

Conjoint analysis, which has also been called multi-attribute compositional modelling, is a statistical technique that originated in mathematical psychology and was introduced into the field of marketing in the 1970's by Paul Green and his associates (Green & Wind, 1975; Green, 1974; Green & Rao, 1971). Conjoint analysis involves the measurement of psychological judgments (such as consumer preferences, or acceptabilities) or the perceived similarities or differences between alternatives.

Conjoint analysis involves the collection of data that enables an estimation of the trade-offs people are willing to make and deriving a utility function that allows such estimation (Newman, 1984). Conjoint analysis usually involves presenting respondents with different product or service packages and asking them about their preferences for (or, in the present study, the perceived value of) those packages. For example, in a study that investigated new cars, respondents might be asked whether they would prefer a car that is sporty in design, has airbags and low petrol consumption or a car that is conservative in design, has airbags but high petrol consumption.

In simple terms, conjoint analysis is used to estimate how people make decisions about products, services or other concepts that have several features. As noted earlier, conjoint analysis provides an indication of the importance attached to the various attributes and the positive or negative effects of the attributes' various levels (e.g. price is important and lower prices are more valuable than higher prices).

The usual method of presenting respondents with the product or service packages is through the use of stimulus cards or written descriptions of the packages, which may include pictures or diagrams, where appropriate. This method is sound, but is limited in terms of the number of attributes that can be examined. This is not a technical limitation but a human one as most people have trouble trying to choose between packages that are described in terms of more than six to eight attributes (Green & Srinivasan, 1990). However, given the purpose of the present study, this was not a problem as the main issue was the relative impact of only one attribute (sub-brand numbering).

According to Green and his various co-researchers (Green & Srinivasan, 1990; Green & Srinivasan, 1978; Green & Rao, 1971), conjoint analysis can use ranked or ratings data, when evaluating pairs of attributes or overall attribute profiles (rather than single attributes). Based on this rank or rating input, conjoint measurement procedures can be used to identify a mathematical function of the brand attributes that:

1. Is interval scaled (produces a set of interval scaled outputs).

2. Best corresponds to the set of subjective evaluations (ordinal judgments) of the brand alternatives made by the respondent.

3. Is either a categorical or polynomial function in the attributes for the rank order data?

The conjoint measurement model assumes that:

1. The set of objects being evaluated is at least weakly ordered (may contain ties).

2. Each object evaluated may be represented by an additive combination of separate utilities for the individual attribute levels.

3. The derived evaluation model is interval scaled and comes as close as possible to recovering the original rank order [non-metric] or ratings [metric] input data.

In several documented conjoint analysis studies, the Ordinary Least Squares (OLS) regression approach to conjoint analysis has been deemed to offer a

simple, yet robust, method of estimating respondents' utilities (part-worth, vector or ideal point models). The attractiveness of the OLS model is in its ability to use rating scales, rather than rankings. The ability to implement designs having large numbers of attributes and levels (through fractional factorial designs) has made this methodology a de-facto standard for conjoint analysis (Green & Srinivasan, 1978).

The objective of OLS conjoint analysis is to produce a set of additive part-worth utilities (vector or ideal point utilities may also be estimated) that identify each respondent's preferences for each level of a set of product attributes. In application, the OLS model solves for utilities using a dummy matrix of independent variables. Each independent variable indicates the presence or absence of a particular attribute level. The dependent variable is the respondent's evaluation of one of the profiles described by the independent variables (Luce & Tukey, 1964).

In the present study, the relative importance measures the difference in the part-worth utilities of the numbers (3, 4, 6 and 8 in this case) after taking account of the part-worth utilities estimated for the other attributes (e.g. price and design). Thus, the higher the relevant relative importance, the greater the relative impact of numbers and, assuming the utilities are as expected (8 is more valuable than 4, for example), this value can be used as a measure of the importance attached to sub-brand numbering.

The part-worth model is the simplest of the utility estimation models and this model represents attribute utilities by a piecewise linear curve (Smith, 2004). The point estimates of the utilities for the attribute levels are connected by the

curve formed by a set of straight lines. The part-worth model reflects a utility function that defines a different utility (part-worth) value for each of the j levels of a given attribute. Due to design considerations, most conjoint studies are likely to be limited to less than five levels; however the number of levels may vary from 2 to 9 or more in reality. The implications of specifying a given preference model (part-worth, linear or ideal point) extend beyond the actual shape of the preference curve being modelled. Each preference model requires that a different number of parameters be estimated. The part-worth model requires that each level of an attribute be defined by a dummy variable distinct column within the design matrix (Green & Srinivasan, 1978). As would be expected, a total of j-1 dummy variables are required to estimate j levels.

Stimulus construction in conjoint analysis addresses attributes to present to the respondent and how (in terms of the kinds of conjoint model) the attributes should be presented. To answer questions on how Chinese behave towards purchase of products with numbers that are often considered sensitive in the culture, the questionnaire and associated materials were described by five attributes, each with 3 "levels" except for the attributes pertaining to the numbers, which had 4 “levels”. The attributes used were:

1. Price: (Above Average, Average, Below Average).

2. Features: (Complete, Limited, Basic).

3. Model Number: (33, 44, 66, 88).

4. Phone or Car plate Number: (3333, 4444, 6666, 8888).

5. Design: (Practical, Trendy, Hi-tech).

The aim of full profile descriptions is to represent real world decision alternatives in a realistic manner. Like real world alternatives, full profile descriptors present an integrated multi-attribute concept (Green, 1974). For the respondent to evaluate several hundred profiles is unreasonable and unmanageable. To ensure a more reasonable and manageable approach, fractional factorial statistical designs are often used to greatly reduce the data collection task. In the present study, which had five factors, as outlined subsequently, each with 3 or 4 levels, the fractional factorial design reduced the needed profiles to only 16.

Each profile is similar enough that consumers can see them as close substitutes, but dissimilar enough that respondents can determine a preference. Each profile is a unique combination of product features. It is from this reduced set of profiles that the set of utilities associated with each of the individual attributes and their associated levels is estimated. It is noteworthy that, while the 16 trial designs were sufficient to estimate main effects, interaction effects between factors cannot be estimated with this number of profiles. The estimation of interactions between variables requires that additional variables be added to the design matrix, but this was not done in the present study as the major purpose was to examine the relative importance of some of the main effects (i.e. those with numbers). The objective of a conjoint analysis is to find a set of part-worth utilities for the various attribute levels so that, when they are appropriately added, a total utility can be estimated for each combination of attribute levels.

The steps in the full profile analysis approach are:

1. The respondent is given a set of stimulus profiles (constructed along fractional factorial design principles in the full profile case).

2. The respondent ranks or rates the stimuli according to some overall criterion, such as preference, acceptability, or likelihood of purchase.

3. In the analysis of the data, part-worth utilities are estimated for the factor levels so that each specific combination of part-worth utilities equals the total utility of a given profile. A set of part-worth utilities is estimated for each respondent.

4. The appropriateness of the model can be examined by computing a goodness-of-fit criterion, such as the adjusted R square statistic, that relates the derived ranking or rating of stimulus profiles to the original ranking or rating data.

The final stage of analysis was to use the relative importance score for the numeric attributes, which were considered to be interval scaled variables, to see whether each respondent's superstition or background (e.g. age, gender or religion) influenced this factor. As noted earlier, it was expected that:

- More superstitious people would attach greater importance to sub-brand numbering.

- Older people would attach greater importance to sub-brand numbering.

- Less well-educated people would attach greater importance to sub-brand numbering.

- People who do not speak English as their usual home language would attach greater importance to sub-brand numbering.

If the conjoint estimation suggested there were segments in either the car or the phone case, the segments were determined and differences were examined to see whether they were due to differences in the importance attached to sub-brand numbering. If such differences were found, the segments were used as the dependent variable in a discriminant analysis to see whether the superstition items or the background variables differentiated the groups.

With conjoint analysis, the analyses outlined should provide answers to the various research questions that were of concern to the present study and should provide insights into the impact that sub-brand numbering has on Singaporean Chinese consumers' decision-making processes, at least for the two products included in the present study.

While there are a number of computer programs that can be used to estimate the required conjoint parameters, including SPSS, the Bretton-Clark suite of programs were used for a number of reasons, namely:

- It was available from the Graduate School of Management (GSM) at the University of Western Australia (UWA).

- It uses a full profile approach that most consumers find easy to understand and seemed appropriate for the number of attributes and levels that were used in the present study (Green & Srinivasan, 1990).

- It estimates the required parameters at an individual level, providing information of the type needed for subsequent analysis.

- It provides what are termed individual and group relative importances that estimate the importance attached to each attribute (e.g. the numbered sub-brand). If these are very different, it implies there are segments within the sample and that it makes little sense to examine average responses. This was important as some of the research questions examined the impact background factors had on the importance attached to the numbers.

- If the relative importances suggested that segments exist, a further Bretton-Clark conjoint clustering program can be used to obtain the desired groups.

- It appears to be an appropriate approach when trying to examine the impact of a product “attribute” (a sub-brand’s number in this case).

THE RESEARCH APPROACH

As noted earlier, it was decided that conjoint analysis will be used to examine the various issues raised in the present study. However, given the secondary hypotheses that were also tested in the study, it was necessary to obtain a superstition scale. Attempts were made to contact Prof Ang Swee Hoon at the National University of Singapore for the superstition scales that were used in her 1997 study. However, the scale was not available. Consequently, the present study was conducted in two phases (a qualitative phase and a quantitative phase).

The qualitative phase preceded the quantitative phase and provided the information required for the quantitative phase. The qualitative phase included scale development aspects, as well as the identification of the attributes and levels consumers associate with cars and mobile phones. The quantitative phase involved the development of a questionnaire through which respondents were asked a series of questions about their preferences for the various hypothetical product packages and about their superstitious beliefs. A number of background questions (e.g. age and gender) were also asked.

Scale Development

Focus groups were seen to be an effective way to gather information for the development of the needed superstition scale, as well as to determine the attributes and attribute levels for use in the subsequent conjoint analysis. Participants were identified and invited on a voluntary basis to attend open discussions on Chinese superstitions and their perception of numbers.

Since groups of between eight to twelve participants are generally accepted as an effective number of participants, focus groups of eight Singaporean adult consumers were organised. Originally, five groups were to be undertaken. However, only four sessions were conducted as the information gathered was consistent and very similar for all the four groups, suggesting there was little value in continuing. Participants in the focus groups were restricted to Chinese people residing in Singapore. Special efforts were made to ensure there was a good mix of participants with different genders, occupations, educational levels, religious backgrounds and ages. At the end of the sessions, which are detailed in Appendix 1, the derived attributes agreed by most participants were price, features, design, model number and a personalisable number, such as the car license number or the phone number. Each attribute was divided into three levels for ease of comparison, except for the two attributes that included numbers. In these cases, the numbers 4 and 8 were included together with 2 other non-conspicuous numbers.

Question Development and Design

It was important for the questionnaire to be carefully constructed to achieve its intended purposes of collecting the information required for the present study. It was also important to ensure that potential respondents were able to undertake and complete the survey easily and quickly to increase the number of usable surveys. With the attributes and their corresponding levels established, an appropriate experimental design was developed.

As there were five attributes in each case (price, features, model number, design and license plate number or mobile phone number) with the same

number of levels (two attributes with four levels and three attributes with three levels), the same experimental design was used in both cases. Had a full factorial design been used, respondents would have had to examine 432 different combinations, which was clearly not feasible. However, a fractional factorial design, which maintains the needed orthogonality between the attributes, can be used to reduce the number of evaluations respondents have to make (Hair, Anderson, Tatham & Black, 1998).

The appropriate design was obtained from Bretton Clark's (1990) Conjoint Designer software, which suggested a sixteen alternatives design that would enable the research questions to be answered. The design was adapted as required for the car and mobile phone survey and respondents were asked to indicate the perceived value of each of the hypothesised model on a 10-point scale that ranged from “Least Valuable” (1) to “Most Valuable” (10). Given the time the survey took, each respondent was asked to answer either the car set or the phone set, but not both.

Respondents were also asked to respond to an additional twenty questions that measured aspects of superstition, using a 5-point Likert-type scale. As already noted, the items were based on information gathered from the focus groups and from existing scales (Mowen & Carlson, 2003; Ang, 1997; Lip, 1992).

Respondents concluded the survey with a series on background questions. While these questions were personal, they were necessary to examine the secondary questions outlined earlier in the present chapter. To ensure a high completion rate, respondents were not required to provide their names, thus ensuring anonymity.

The Questionnaire

The questionnaire was constructed to determine how Chinese Singaporeans consumers responded when comparing products with a given set of attributes, including some related to numbers. As already noted, the questionnaire was divided into three sections, namely:

1. The first section asked respondents about the value they would attach to a number of hypothetical products (either cars or mobile phones). As noted earlier, the sixteen options were based on an appropriate fractional factorial design that enabled an assessment to be made of the importance placed on each attribute (e.g. price) and the value attached to each aspect of each attribute (e.g. a low or a high price). Each model of the product (car or mobile phone) had a different combination of the various attributes levels.

2. The second section asked respondents to agree or disagree with a number of questions designed to understand how superstitious a respondent was.

3. The final section asked a number of background questions, including age, gender, income, dialect group, dialect spoken at home, education, occupation and religious affiliation.

Pre-testing

Eight responses were obtained during the pre-test stage, which was undertaken by friends and fellow doctoral students, who were asked for their

comments on the various questions and the survey as a whole. The people who were selected were expected to give prompt, honest and frank feedback. The aim was to fine-tune the survey before it was made accessible to the mass audience. In particular the pre-test was designed to:

- Ensure questions and instructions were clear
- Ensure the survey had an easy-to-follow format
- Ensure the survey had easy-to-understand questions and instructions
- Ensure the survey had a coherent question flow
- Ensure it was easy to relate to the questions
- Ensure access to the website worked properly

Respondents were also asked to comment on the aesthetics of the presentation and how they would like to see the survey improved. Modifications were made based on the comments obtained to ensure instructions and questions were easy to follow and understand. Final checks were made with some friends and the study's supervisor to ensure the survey was acceptable before it went “live” on the Internet as the questionnaire was designed as an online survey.

Ethical Considerations

Since the present study required personal participation and information from respondents, permission was obtained from the University of Western

Australia's Ethics Committee prior to the commencement of the focus groups and the online survey. The Ethics Committee laid down criteria, which were observed and incorporated into the format of the survey. Details of these criteria are discussed later in the chapter.

To ensure that the ethical commitments were met, the e-mail that was sent to recruit respondents reinforced the cover letter that was sent as an attachment and highlighted that the survey was voluntary and that respondents had to be at least 18 years of age. Respondents were reminded that responses were anonymous and were informed of the supervisor and the university's contact in the event of complaints. Since the survey was to be administered electronically, special settings were put in place so respondents who participated in the survey automatically acknowledged that they have done so voluntarily and that they were 18 years or older.

The Ethics Committee also required a backup of the data obtained. Backups were made through various storage devices. The data were stored on a CD-Rom, a compact flash memory disk, some diskettes and the computer's hard disk drive. Access to the data was only available to the researcher and the supervisor. All records will be kept for six years.

Points for Consideration

Several concerns were addressed at the beginning of the study to ensure that the survey was successfully completed. These concerns include convenience for the researcher and for respondents, a wide sample reach, cost effectiveness, ease of administration and the consolidation of data.

While conjoint data can be collected in a variety of ways, such as through face-to-face interviews, mailed interviews or telephone interviews, the adoption of computer technology in Singapore has made internet access common, suggesting an online survey would be appropriate. Indeed, Singapore has one of the highest levels of computer ownership and use in the world, as 7 out of 10 homes own a computer and 6 out of 10 Singaporeans have access to the Internet and are infocomm-literate.

Further, the use of online services has increased in recent years, with many Singaporeans spending time on the internet for leisure and community bonding. According to an Infocomm Literacy Survey undertaken in 2002, almost two-thirds (65%) of the resident population aged 15 to 69 years have used at least one infocomm appliance or service, while half (50%) of the resident population were "infocomm competent" and 15% were "e-business savvy" (Ng, 2003).

Convenience

As internet access was not an issue for Singaporeans, other Internet advantages were considered. The internet offers respondents convenience. Hosting the survey on the internet allowed respondents to access and complete the survey at their own convenience. In addition, respondents did not need to be physically in Singapore to complete the questionnaire, as the survey website was accessible anywhere anytime in the world. Respondents need not be at the same place at the same time, thus providing a wider sample spread.

Data Consolidation

Consolidation of the data was also easier as all the information was inputted electronically. Responses keyed in by respondents were immediately captured electronically and easily tabulated and extracted for subsequent data analysis. There was no need for manual entry of the data since the consolidated data could be easily extracted electronically. This eliminated human error in data entry. Administration of the surveys was also kept to a minimum, allowing the researcher to focus on contacting potential respondents and monitoring the website and the responses obtained.

Cost

An internet-based survey was also cost effective as there was no cost involved in hosting the website since it was created and hosted by the University of Western Australia. The set-up costs were borne by the Graduate School of Management at the University of Western Australia and there were no additional data entry costs as the survey provided a database that could be used in the conjoint analysis software that was used in the present study (Bretton-Clark, 1992).

A comparison was made between undertaking an internet survey and a traditional paper-based survey and the results are shown in Table 3.1. As a result, the decision was made to host the survey on the Internet because the Internet option addressed many concerns.

TABLE 3.1: A comparison Between an Internet and a Paper Survey

FACTOR	INTERNET SURVEY	PAPER SURVEY
ACCESS	Allows respondents to access the survey anytime, anywhere	Allows a captured audience to complete the survey on-the-spot
DATA ENTRY	Data is captured electronically as the respondents complete the survey	Data must be manually entered into the computer
VALIDITY	High validity as areas of concerns can be addressed through special functions in the program	Subject to the respondents. Human error will occur due to missing information, incomplete questionnaires or contradicting responses
COORDINATION	Convenient for the researcher since everything is self-administered once the questions are completed and hosted	Tedious since each individual survey must be sorted and logged.
COST	Low if the web hosting and the design is available, but high when an external expert is hired for the job	High for the number of photocopies to be made

THE ONLINE WEB SURVEY

In creating a website, it was important to understand the flow to ensure validity and address concerns raised by the Ethics Committee. A flow diagram (which is shown in Figure 3.1) provides a visual understanding of the process.

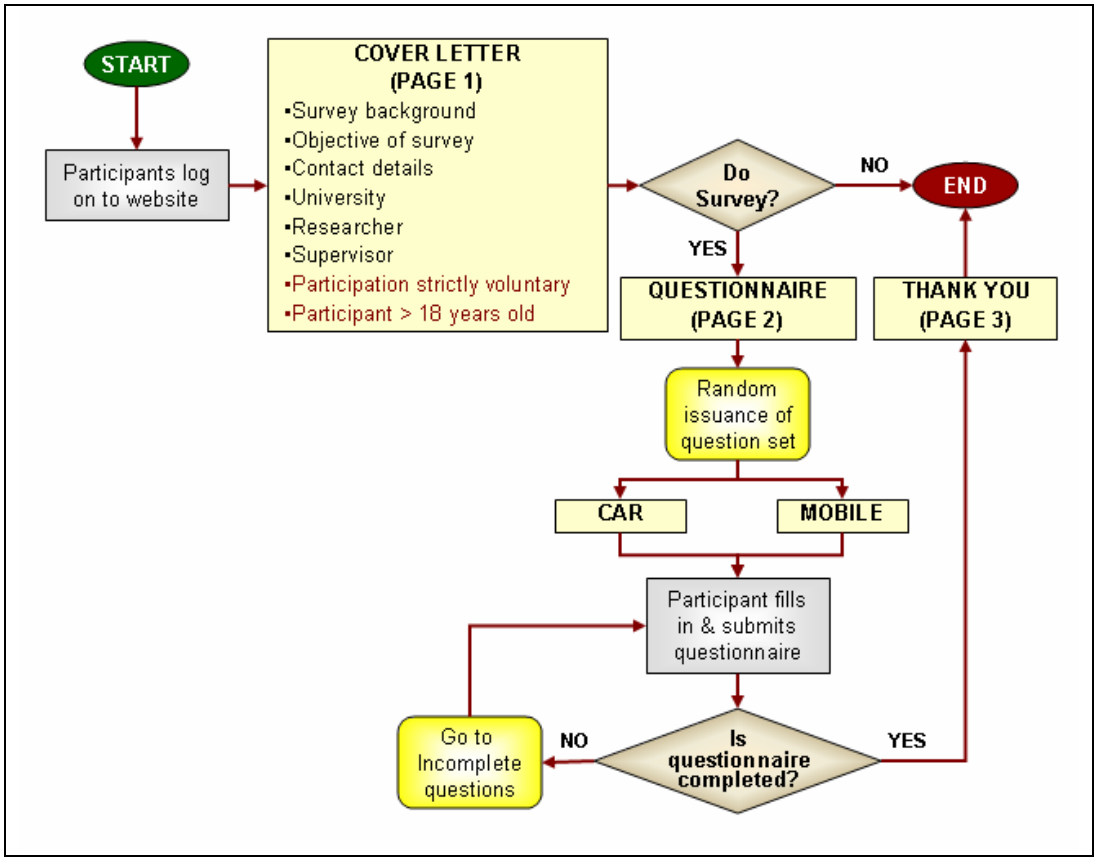

FIGURE 3.1: The Online Survey Flow Diagram

Areas of concerns - Access

While Singapore has a high computer penetration rate, not every computer owner has the same equipment or uses the same software. Since the survey would be impacted by users' hardware, software and computer preferences, its look may differ on different respondents' computers for a variety of reasons.

Thus, several concerns were highlighted to ensure that the online survey was designed to minimise such disparities.

Monitors

Computer monitors vary in size and configuration for different screen displays. As a result, the images on a screen appear differently from one monitor to another. Respondents may choose a different setting for the screen configuration (with the three most common being displays with 640 x 480, 800 x 600, or 1024 x 768 pixels), and respondents may choose to view the questionnaire as a full or partial (tiled) screen.

As a result of any, or all, of these differences, what the researcher sees on the screen may be different to what a respondent sees, particularly for the survey. In addition, choosing to use a full screen view of a Web questionnaire or a partial (tiled) screen view may affect whether the question stem and the categories are seen without scrolling and whether lines wrap around (break into shorter length). Sometimes changes in the visual appearance of questions occur because a respondent's computer disables the features installed by the questionnaire researcher (Dillman, 2000).

To ensure that the format was readable to all potential respondents, the configuration for the questionnaire was set to the minimal 640 x 480 pixels and no special features were included. This meant that, regardless of any monitor used, respondents will be able to view the questions.

Modems

Access speed differs from hardware to hardware and Internet Service Provider (ISP) to ISP. People are connected to internet servers by telephone lines with widely varying transmission capabilities, ranging from broadband to dial-up. A full screen of text that may take a few seconds for some people to receive may take minutes for others to obtain because of poor connections, older equipment or a reduced capability internet service provider (Dillman, 2000). To ensure it was easy to download, the survey was designed with minimal graphics and no animation. The two-page survey was kept static, so that only minimal memory was needed to view the questions.

Software

Respondents may also have a computer with a different operating system (e.g. PC or Macintosh), a different kind of web browser (e.g. Internet Explorer or Netscape) or even a different release of browser software (Internet Explorer 5.0 or 6.0). Therefore, it was vital to ensure that the on screen display had a format that was viewable regardless of the operating system used, as well as their different versions.

Areas of concern - The Survey

Ease of completing the survey

Many people do not like to think about the process when completing a survey. Therefore, it was important to provide a format through which respondents could quickly identify an answer and complete the survey. Questions were kept

simple and the types of question chosen were closed ended with ordered response categories. As already noted, a 10-point Scale ranging from “Least Valuable” to “Most Valuable” was used for the conjoint analysis section, while a 5-point Likert-type Scale, ranging from “Strongly Agree” to “Strongly Disagree”, was used for the superstition section. Background data (e.g. gender and age) were obtained through a series of closed-ended questions.

Format of the survey

To ensure that the survey was easy to follow and gave no surprises to respondents, questions were presented in a conventional format that was similar to the format normally used in pen and paper self-administered questionnaires. The advantage was that respondents were able to identify with the format and felt familiar with the survey's approach. Providing a familiar format allows the respondents to complete the survey quickly without interruption, as they did not have to waste time thinking about an unfamiliar format (Dillman, 2000).

Ease of understanding the questions

It was important that respondents followed and understood the questions. Instructions were provided at the beginning of each section to reduce uncertainty. Questions were kept specific and short and used terms with which respondents were able to identify.

Visual stimulus was also added to the survey to ensure respondents were able to follow each question and understand the choices available to them. Questions were shaded in alternating hues to ensure ease of reading.

Attributes were also boxed for each model to prevent confusion. A consistent format was used throughout to ensure respondents were able to follow the questions easily. Since a page on the internet is not defined by a particular length, blank spaces were introduced when necessary to prevent overcrowding. Each question had a reference marker, such as “Car A” or “Question 1” so that, if a question was missed, the computer was able to prompt and direct the respondent back to the incomplete question.

Minimising invalid responses

To minimise invalid responses, response categories were set to be mutually exclusive through the use of radio buttons that allowed only one answer and required “clicking” an alternative button to erase a previous answer, ensuring all submitted surveys were answered as required. To eliminate incomplete questionnaires, the website was programmed to prompt respondents and direct them to any incomplete questions. The program vetted the questionnaire as it was being answered and ensured that all questions were completed before respondents were able to submit the questionnaire.

Mass Reach

In order to ensure a high response rate, the survey had to have a reach that was convenient to potential respondents. Respondents were invited to participate by electronic mail (e-mail), Short Message Services and phone calls to visit a specific and complete the survey at that site. A total of 200 completed surveys were set as the minimum target to ensure there were enough observations to look at the sub-groups of interest.

Once the flow was confirmed and the areas of concerns were addressed, the website was created based on a three-page survey comprising of a cover letter (page 1), the questionnaire (page 2) and a thank you note (page 3).

Website Development

Bearing in mind the types of computer systems most of the Singaporean respondents were likely to have, the survey was based on a PC operating system using the Internet Explorer web browser, as this was the most common system combination used.

The questions were first drafted using Microsoft Word and went through several stages of modification as a result of testing and re-testing before they were converted into Hyper-Text Markup Language (html) format and posted on the internet with appropriate built-in features and functions.

The survey was designed to provide dynamic interaction between the respondent and the questionnaire. Special commands were incorporated into the survey so that, when a question was missed, the computer prompted the respondent to complete the question before proceeding. Similarly, drop-down boxes with answer choices were used, saving time for respondents. Answer options were also set to be mutually exclusive for each question.

Designing the format and the questions resulted in many e-mail exchanges between the researcher and the programmer. As a result of the concerns for respondents accessing the survey noted earlier, special attention was paid to the type of computer operating system and the screen configuration. Since many respondents accessed the link with different modem speeds, all forms of

animation were avoided to ensure a fast link-up as the questionnaire remained static. Technical sophistication and configuration settings were all set to the minimum in anticipation of the different computer hardware available to respondents in their office or home. The aim was to ensure that it was possible for all Web users to receive and respond to the survey easily.

The Cover Letter (Page 1)

The cover letter was necessary, as it was part of the University Ethics Committee's requirements. The Ethics Committee stipulated that certain information must be available and made known to the respondents before the survey could be carried out. The aim of the cover letter was to provide the respondents with the researcher's name, the university and the course in which he was involved, the purpose of the survey, the kind of information required from respondents and a contact name in the case of a complaint or a request for more information.

Part of the ethics code was that the survey must be voluntary and that respondents must be at least 18 years of age. Since the computer program allowed certain commands to be incorporated into the survey, respondents were required to acknowledge that they were at least 18 years of age and that they were undertaking the survey voluntarily. By "clicking" on the "Do Survey" button, respondents declared that they meet the necessary criteria. Activating the "Do Survey" button instructed the computer to do two things. Firstly, it randomly assigned the respondent to the mobile phone or the car questions set and, secondly, it linked the respondent to that survey.

Providing the relevant information

Respondents were provided with all the necessary information from the start. Information provided was presented in the e-mail invitation and a cover letter was attached to the e-mail that included:

- The researcher's name.
- The university's name.
- An explanation that the survey was part of a DBA project.
- The purpose of the survey itself.
- An explanation as to the information required from the respondents.
- Recognition that the survey was voluntary.
- A note that respondents needed to be at least 18 years old.
- A contact in case respondents had any difficulties.

The Questionnaire (Page 2)

As already noted, the questionnaire had three parts. Part 1 asked about the respondent's preference for the various hypothetical products. Part 2 asked about superstitions and part 3 provided background information. While it was clear that many people are hesitant to provide personal and sensitive information, this information was necessary for the present study. To ensure a high response rate, respondents were asked to participate anonymously, providing them the ease of mind when completing the requested personal

information. To further increase the response rate, efforts were made to ensure that the information asked was not overly sensitive. As a result, choices were clustered within specific range, rather than asking the respondent to provide specific answers. To ensure the appropriateness of the background questions, information gathered from the focus groups and national statistics provided the basis of the way the answers were developed.

Thank You Notes (Page 3)

Respondents were thanked on several occasions for their time and effort. Each respondent was thanked at least three times, namely:

1. In the e-mail - thanking them in advance for “clicking” the link and participating in the survey.

2. In the cover letter that preceded the survey - thanking them for their participation.

3. At the end of completing the survey when a “pop-up” box appeared (Page 3 on the web survey) - thanking the respondent for completing the survey.

Those who notified the researcher that the questionnaire has been completed were thanked a fourth time, either by e-mail, SMS, or telephone call, depending on how the respondent communicated with the researcher. As a consequence of these decisions a simple online questionnaire was developed that is shown in Appendix II.

Identifying the Sample

It was important to ensure consumers with different backgrounds were selected in the sample as a number of hypotheses required respondents with different educational experiences, different religious beliefs and different ethnic backgrounds, although all needed to be Chinese. Convenience was also a factor and, therefore, the researcher's existing contacts were used to obtain potential respondents.

However, to ensure a wide reach, a "snowball" technique was used. The "snowball" technique relies on people in each level adding to the initial contacts to build the numbers needed in the survey. For example, a researcher may contact 10 people and encourage the 10 contacted to each contact another 10 people. At this level, the initial 10 contacted will have a reach of 100. If the 100 contact another 10 each, the "snowballing" effect will multiply it to 1,000 by the next level. Of course, this sounds easier than it is, as not every one will add to the "snowball". Consequently, other measures were put in place to ensure the target of 200 respondents was achieved.

The questionnaire was delivered to potential respondents through a computer link sent to them by e-mail. To ensure a broad reach, potential respondents were also contacted by SMS and telephone, informing them of the survey and the appropriate website. To avoid accusation of "spamming"[1] or flooding through a mass broadcast of e-mails, respondents were identified and separated into two groups.

[1] "Spam" is commonly defined as a flooding of the Internet with many copies of the same message in an attempt to force the message on people who would not otherwise choose to receive it.

Group 1 included close friends, colleagues and relatives. Since relationships with this group were personal, the probability of people in the group completing the survey was high. In addition, recipients in this group were instructed to send the link to their own circle of friends, in the hope that they too would complete the survey based on their relationship with the first respondent.

Collecting the Data

As already noted, the intended approach was similar to a "snowball" increasing in size as it gathers more snow. The aim of the "snowballing" approach was to obtain the desired 200 completed. A total of 70 individual e-mails were sent to this group, with follow up telephone calls following the e-mails.

Group 2 included more distant friends, distant relatives, ex-colleagues, business associates and acquaintances. Since the response rate for this group was not expected to be high, 250 e-mails were sent to this group.

The Challenges Faced

While 320 e-mails were initially posted, responses were below the expectations. Over a period of two months, only 115 completed surveys were collected. There were a number of reasons for the poor response, including:

- Many Singaporeans have regional responsibilities and are often out-stationed. While the internet has regional reach and may provide convenience for a Singaporean responding to the survey request in, say, Hong Kong, this may not always be the case.

With the high reliance and traffic on e-mails as a standard means of communication in Singapore, anyone can be easily flooded with hundreds of e-mail in a day if the incoming mails in the “inbox” are not cleared daily. If someone is out of the office and the inbox is flooded, it is likely that the person will ignore the not-so-important mail and attend to the more urgent ones. The less important e-mails will be deleted, forgotten or passed over. Thus, respondents may have chosen not to complete the survey if they were “out of office”.

- While many people own a computer in Singapore, many Singaporeans also make use of free e-mail addresses. These free web-mail addresses, such as those provided by Microsoft “Hotmail”, “Yahoo”, offer limited memory space, usually 2MB. The limited memory space is often used up, resulting in the mailbox always being full. As a result, an identified candidate will not be informed of the survey or the link and, therefore, will not complete the survey.

- While high mobility may explain some invalid addresses, the poor economic situation in Asia during the time the data was collected also took its toll on many Singaporeans who were retrenched. This resulted in many e-mail addresses being no longer valid and the intended candidates were no longer reachable electronically. Interestingly, the largest number of invalid e-mail addresses came from Group 2 members, who were mainly business contacts.

- Those who do not check their emails daily or who receive a lot of "spam" or unwanted e-mails, may easily have missed the mail. Sometimes, the fear of viruses from opening an unknown file or an unfamiliar sender may prompt recipients to delete a file and place the e-mail in the "Recycle Bin". For this reason, known respondents were encouraged to send the link to friends whom they knew to minimise the possibility of deleted emails and encourage response rate.

- During an initial two months period, server problems were experienced, resulting in some respondents not being able to submit their responses. While the problem was rectified when it was brought to the attention of the researcher, it was not known how many respondents were affected. Those who were affected and had contacted the researcher were invited to revisit the website to complete the survey. This happened twice during a two-month period, which prompted the webmaster to host the survey site on another server. The survey was originally hosted at www.xrar.com/survey/56d3/ and subsequently moved to http://www.ecs.ecel.uwa.edu.au/survey/56d3/. Anyone who logged on to the original site was automatically re-directed to http://www.ecs.ecel.uwa.edu.au/survey/56d3/. This was a difficult problem as the researcher was not able to identify all those affected.

Follow-up Actions

As the initial 320 e-mails obtained only 88 responses, a new set of one hundred e-mail addresses and mobile phone numbers were compiled from previous employments and alumni database. E-mails and SMS messages were sent out with the new link, bringing the total number of responses to one hundred and fifteen (115).

Efforts were also made to contact potential candidates directly through a phone call or by meeting them face-to-face in order to encourage them to participate in the survey. In addition, strips of paper with the website (URL) address were printed and handed to potential respondents as a reminder. This method had a better response, increasing the number of respondents to one hundred and sixty-eight (168). Special arrangement was also made to tap into the University of Western Australia student database at PSB Academy in Singapore. The final outcome was 256 responses. As a result of random allocation of the mobile phone and car questionnaire as noted earlier and in Figure 3.1, 132 responses were eventually collected pertaining to mobile phones and 124 responses were collected pertaining to cars. Out of 256 questionnaires received, only 237 (117 for mobile phones and 120 for cars) were usable after removing questionnaires from non-Chinese respondents, questionnaires with invalid data and those received after the “cut-off-date”.

Collating the Responses

Weekly updates were made and once the minimum number of responses was achieved, a grace period of another two weeks was given before the data was

finally collated. The purpose of the two weeks was to allow more participants to response to the survey and to have a higher number of completed surveys, just in case there were any surveys that needed to be rejected or “thrown out”. Questionnaires received after the “cut-off-date” were not accepted even if they were valid. A total of nineteen (19) surveys were rejected as they did not meet the survey criteria or were received after the “cut-off-date”.

Collecting the data was easy and straight-forward. From the program, the data was extracted and the part worth utilities estimated by the Conjoint Analyser program before the estimated values were exported to SPSS for further analysis.

Analysing the Data

Since most of the research questions addressed the background profile of the respondents and their perceptions, the demography of the respondents was individually examined to ensure there were sufficient respondents in each category. The demographic breakdown confirmed there was sufficient spread across the groups for the various hypotheses to be tested.

As already noted, conjoint analysis was used to estimate the trade-offs respondents made when evaluating cars or mobile phones, therefore the part-worth utility for each attribute was also examined. Details of the analysis are discussed in the next chapter.

SUMMARY

This chapter provided some background and arguments on why Conjoint Analysis was the most appropriate for this study. In addition, the rationale for the research approach was presented. Though the survey could have been conducted using traditional paper method, there were more benefits to have the questionnaire done on-line via a web survey. Finally, detailed steps taken for the development of the questionnaire, creation of the website and collection of the data were discussed for this study.

In the next chapter, the results obtained from analysing the collected data are outlined. The backgrounds of the respondents are examined first, followed by a review of the part-worth utilities obtained. Finally, the various hypotheses provided in the present chapter are discussed.

CHAPTER 4

THE RESULTS OBTAINED

INTRODUCTION

In Chapter Three, the approach used to obtain the data needed to answer the present study's questions was outlined and discussed. As mentioned in that Chapter, a total of two hundred and fifty-six (256) people responded to the online survey. However, only two hundred and thirty-seven (237) responses were useable for the study's purposes. The data from these 237 respondents were used to obtain the results that are discussed in the present Chapter.

The background data was examined first to ensure that there were reasonable numbers of people in the various categories of interest (e.g. different age groups, different genders and different language groups) and these results are reported and discussed in the first part of the Chapter. The responses to the superstition items were analysed next to see whether they provided an appropriate set of scales for use in the subsequent examination of the impact they had on the importance respondents attached to the numeric attributes included in the conjoint analysis.

The data obtained from the conjoint analysis section of the questionnaire were then used to estimate part-worth utility functions for each respondent and, subsequently, the relative importance attached to the two numeric attributes included in the design (i.e. the model number and either the personalised licence plates or the telephone number). As was noted in Chapter Three, these

estimates were obtained using the ordinary least squares regression approach contained in Bretton Clark's (1992) Conjoint Analyzer software program. The results of this phase of the analysis, which were the central part of the study, are discussed in detail later in the Chapter. Finally, the impact of a number on background factors (e.g. gender and age) had on the relative importance respondents attached to the numeric attributes were examined and the results obtained are reported later in the Chapter.

THE RESULTS

THE BACKGROUND VARIABLES

There were slightly more males (55%) than females (45%) in the sample, but there were enough of each gender to make comparisons possible. From the age distribution shown in Figure 4.1, it can be seen that there was a reasonable spread of ages, although most respondents were in their thirties. Again there was a sufficient spread of ages for the purposes of the present study.

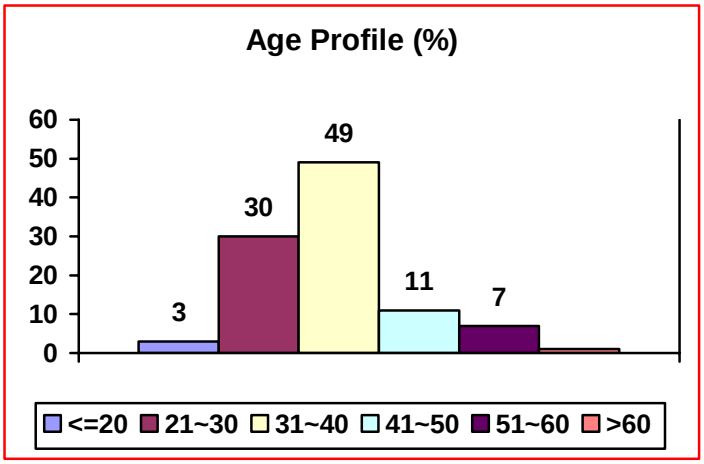

FIGURE 4.1: Respondents' Age Profile

Fifty-six percent (56%) of the respondents were married, while forty-one percent (41%) were single. As can be seen in Figure 4.2, most were Hokkiens (37%), Teochews (23%) or Cantonese (22%), as was expected. There was sufficient spread across the various groups for the present study's purposes.

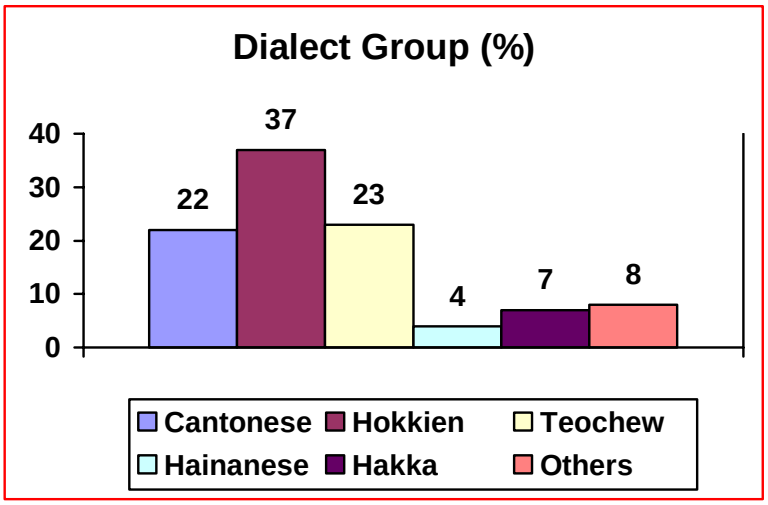

FIGURE 4.2: Respondents' Dialect Groups

The languages, or dialects, that respondents used at home are shown in Figure 4.3. English was the most popular language spoken at home (70%), while Mandarin was second most common such language (15%). Cantonese and Hokkien were the most common of the Chinese dialects (13%).

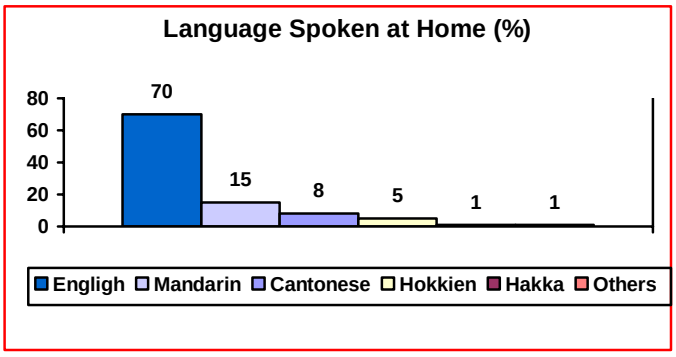

FIGURE 4.3: Respondents' Home Language Profile

Respondents' incomes are shown in Figure 4.4. Interestingly, there was not a great degree of variation, with 34% of respondents earning between $30,001 and $60,000 annually. High-income earners (with income above $90,000) were the second largest group.

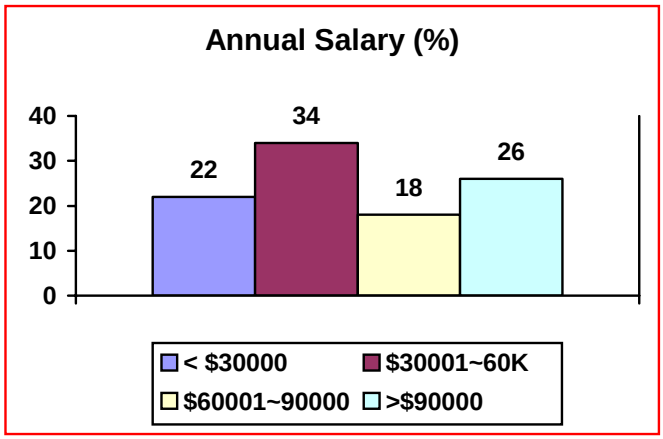

FIGURE 4.4: Respondents' Annual Incomes

As can be seen from Figure 4.5, Christianity was the most popular religion (63%). There was also a large group who had no religion (18%), while Asian religions, such as Buddhism and Taoism, were followed by eighteen percent of the respondents.

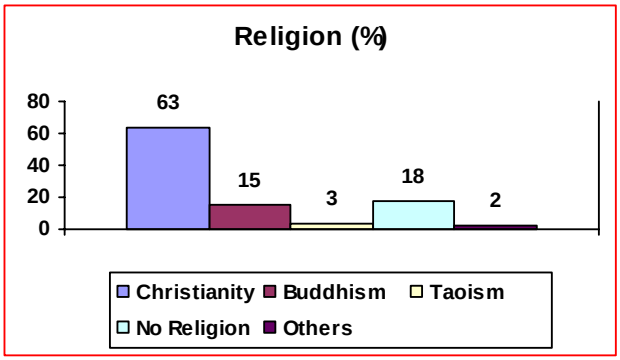

FIGURE 4.5: Respondents' Religions

As can be seen in Figure 4.6, seven-six percent of respondents had university qualifications, while only eight percent (8%) has not achieved at least A' levels.

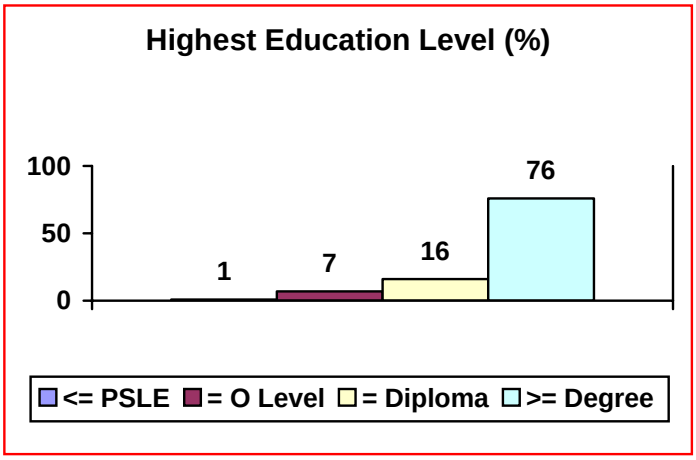

FIGURE 4.6: Respondents' Education Profile

There were a large number of professionals among the respondents, with forty percent in senior positions (top management, consultants, HOD); while nineteen percent were middle managers and a further nineteen percent were employed in administrative positions.

A Summary of the Respondents' Demographic Profile

All of the respondents selected were Chinese, as required for the present study, and the distribution was as expected, except for the Language spoken at home, as about 70% of respondents spoke English, while 30% spoke a Chinese dialect. This was reflected in some of the other variables, as there were more Christians and people were better educated than was expected.

This was not surprising as, according to the Singapore Department of Statistics (Lee, 2001; Census, 2000; 2000), religion, language spoken at home and education level are closely linked. English-speaking Singaporeans tend to

have better educational qualifications and university graduates are more likely to practice Christianity (Census, 2000). These biases were not surprising as the sample was obtained from a “snowballing” approach started by the researcher, who has the same profile. However, there were sufficient respondents in the various categories to examine the various research questions posed earlier.

THE SUPERSTITION SCALE

As was noted in Chapter Three, twenty items were included in the online survey that asked about a variety of superstitious beliefs and actions. These items were developed from the focus groups and earlier studies (Lip 1992; Ang 1997; Mowen and Carlson 2003). As they had not been used together previously, the twenty items were examined in an exploratory way, starting with the computation of descriptive statistics, which are shown in Table 4.1.

Most of the superstition questions were phrased so that higher scores implied that a respondent was more superstitious. A few questions were worded in a reverse manner, so higher scores suggested a respondent was less superstitious and these questions were recoded so higher scores implied greater superstition in all cases. These questions were:

- I choose phone numbers that are easy to remember
- I determine my own fate
- Price has the biggest influence when making a purchase
- I would buy a house on the 4th floor.

TABLE 4.1: Descriptive Statistic – Superstition Items

QUESTIONS	Mean	Std Dev.	Skew	Kurtosis
1. I think I am superstitious	2.40	1.10	0.257	-0.90
2. I choose phone numbers that are easy to remember *	1.88	0.98	1.357	1.92
3. I would pay more for a product if it is going to bring me good luck	2.33	1.22	0.33	-1.18
4. The stars can predict the future	1.84	0.98	0.81	-0.31
5. I determine my own fate *	2.66	1.24	0.60	-0.62
6. Flower Horns (Luohan Fish) and Arrowanas (Dragon Fish) bring good luck	1.75	.94	1.04	0.41
7. Breaking anything during the Lunar New Year brings bad luck in the coming year	1.93	1.07	0.94	-0.04
8. Price has the biggest influence when making a purchase *	2.10	0.93	0.70	.33
9. By Lunar New Year's day, all debts should be paid to avoid bad luck in the coming year	2.38	1.28	0.40	-1.05
10. I think numbers have meaning	2.78	1.24	-0.02	-1.06
11. My personality is determined by my birth sign	2.18	1.18	0.48	-1.03
12. Sweeping the floor on Lunar New Year is unlucky.	2.06	1.20	0.82	-0.38
13. I would buy a house on the 4th floor *	2.73	1.24	0.34	-0.71
14. I am concerned about how others perceive of me	3.45	0.94	-0.33	-0.14
15. My birth date affects my future.	1.98	1.14	0.79	-0.54

QUESTIONS	Mean	Std Dev.	Skew	Kurtosis
16. I have little influence over the things that happen to me	2.50	1.04	0.43	-0.28
17. When buying a house, I would avoid certain unit number and/or floors	2.64	1.23	0.21	-0.94
18. When purchasing a mobile phone or a car, I would sum up the number to see the total	1.57	0.99	1.87	2.92
19. The stars, planets, and birthday affect my destiny	1.83	1.06	1.02	0.02
20. What happens to people is often determined by fate.	2.37	1.16	0.31	-0.97

* Recoded

Table 4.1 shows the means, standard deviations, skewness and kurtosis of responses from those who answered either the car or mobile phone survey. The means tended to be low and significant skews were positive, which suggests most respondents did not feel that they were superstitious. Indeed, the mean of the direct superstition question ("I think I am superstitious") was only 2.40. However, the standard deviations suggest there was some variation in such views, making the data suitable for the purposes of the present study. This was in-line with earlier studies that suggested consumers' actions may differ, even when they claimed they were not superstitious (Gallup & Newport, 1991). However, before using the items in subsequent analysis, an exploratory factor analysis was undertaken to see whether the items reflected a set of underlying superstition dimensions, rather than measuring different aspects of superstition. The results of this analysis are discussed in the next section.

As the purpose of this analysis was to examine the structure of the interrelationships between the superstition items, a principal components analysis was undertaken and the resulting factors were rotated to obtain a simple structure as this is the easiest form to interpret (Hair et al. 1998). As the Measure of Sampling Adequacy (MSA) (Kaiser, 1974) was 0.91, it was clear that a factor analysis would be useful (Coakes & Steed, 2001).

Five components with eigenvalues greater than one were found, and together, that explained 63% of the variance in the data. However, the scree plot suggested there was a single strong factor that explained 39% of the variance. An examination of the communalities of the items when only one factor was retained suggested that six of the items were not well explained by the factor as they had very low communalities (below 0.20). These items were removed and the remaining fourteen items were re-examined. In this case the MSA was 0.92, again suggesting that a factor analysis was likely to be useful. The first factor in the case explained 54% of the variance in the data and the items all loaded onto the factor, as can be seen in Table 4.2, although some were below the 0.60 level that Bagozzi and Foxall (1996) have suggested should be the minimum level.

TABLE 4.2: Factor Loadings – Superstition Items

ITEM	LOADING
I think I am superstitious	0.72
Flower Horns (Luohan Fish) and Arrowanas (Dragon Fish) bring good luck	0.76
The stars can predict the future	0.74

I would pay more for a product if it is going to bring me good luck	0.68
Breaking anything during the Lunar New Year brings bad luck in the coming year	0.80
By Lunar New Year's day, all debts should be paid to avoid bad luck in the coming year	0.80
I think numbers have meaning	0.59
My personality is determined by my birth sign	0.85
Sweeping the floor on Lunar New Year is unlucky.	0.83
When buying a house, I would avoid certain unit number or floors	0.47
When purchasing a mobile phone or a car, I would sum up the number to see the total	0.57
The stars, planets, and birthday affect my destiny	0.84
What happens to people is often determined by fate	0.71
My birth date affects my future.	0.82

However, before deciding on the final composition of the superstition scale, its reliability was assessed (Hair et al. 1998). The fourteen item scale had a Cronbach's (1951) alpha of 0.93, which suggests the scale is extremely reliable and can be used with confidence. Consequently, it was decided that a single superstition scale should be computed for subsequent use. In this case, the mean score of the summated scale was 2.15, with a standard deviation of 0.82 and a skew of 0.46, confirming earlier comments that most respondents did not feel that they were very superstitious.

Having examined the sample's background and the items included to measure how superstitious respondents felt they were, attention moved to the core of the analysis and the estimation of the part-worth utility scores. The results of this phase of the analysis are discussed in the next section.

THE CONJOINT ANALYSIS

As already mentioned, conjoint analysis was used to examine the trade-off consumers made when evaluating cars or mobile phones. Part-worth utility functions were estimated for each person and the average part-worth utilities for the cars and the phones are discussed in this section.

The various diagrams show the average part-worth utilities for the relevant groups of respondents, bearing in mind that each respondent was only asked about cars or mobile phones and not about both products. Thus, the results are based on half the sample in each case. The diagrams show which attribute levels added more value to the relevant product and the differences in the value attached to the various attribute levels. Within the analysis, higher scores imply that an attribute level added more value and a big difference implies that the difference between two levels was greater than the difference between two levels with only a small difference. The results are presented for each attribute, starting with the results obtained for the cars.

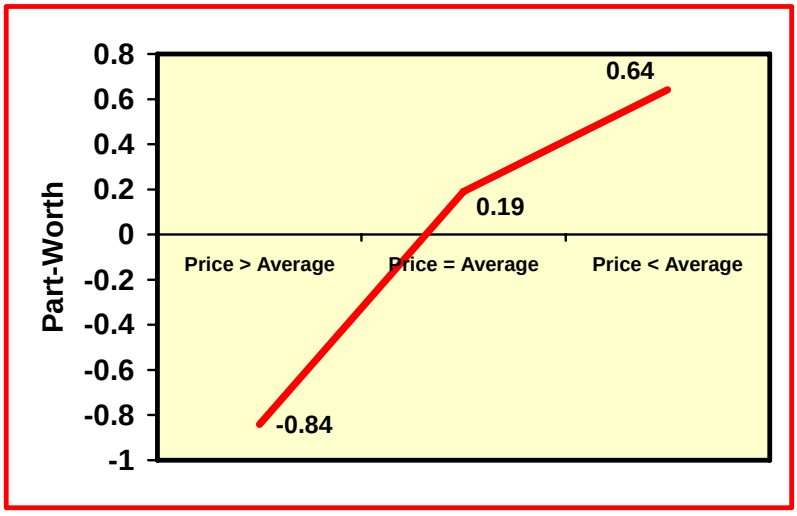

FIGURE 4.7: Part-Worth Utilities - Car Prices

From Figure 4.7, it can be seen that the part-worth utilities for the various price levels were as expected, as an above-average price had a negative utility, while a below-average price had a positive utility. Interestingly, the fall in utility from an average price to an above-average price was greater than the rise in utility from an average price to a below-average price, suggesting respondents felt worse about above-average prices and they felt better about below-average prices.

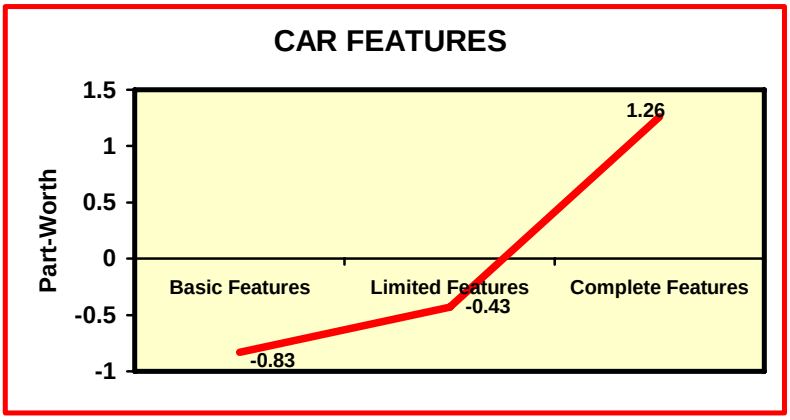

FIGURE 4.8: Part-Worth Utilities - Car Features

Figure 4.8 suggests respondents valued a completely featured car much more than they valued a car with limited or basic features. Indeed, there was little difference in the utility obtained from basic or limited features, suggesting producers should think seriously about offering a "limited features" alternative.

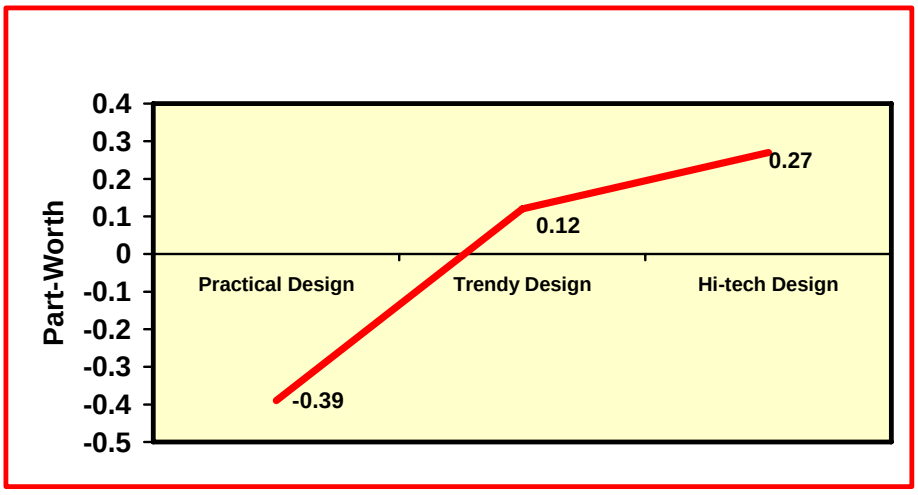

FIGURE 4.9: Part-Worth Utilities - Car Design

Figure 4.9 suggests respondents did not value a practical design, but were largely indifferent between a trendy and a hi-tech design, although the hi-tech design was slightly preferred.

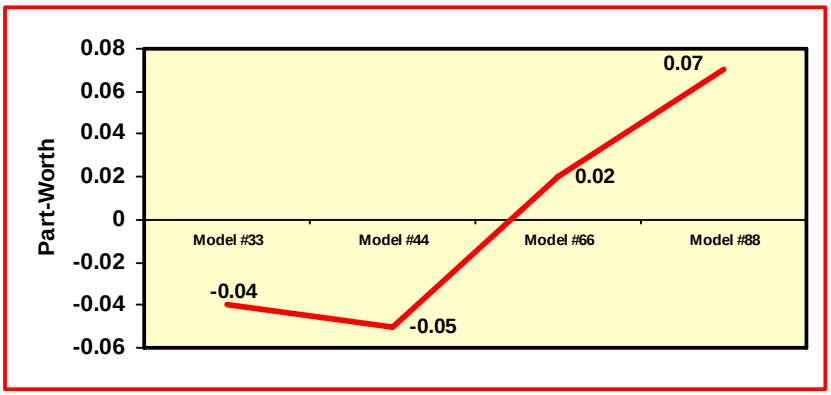

FIGURE 4.10: Part-Worth Utilities - Car Model Number

As can be seen from Figure 4.10, the difference between the number 33 and the number 44 was minimal, although the number 44 was the least desired. The number 66 was preferred over 33 and 44, but it is clear that the number 88 was much more preferred than was any other model number.

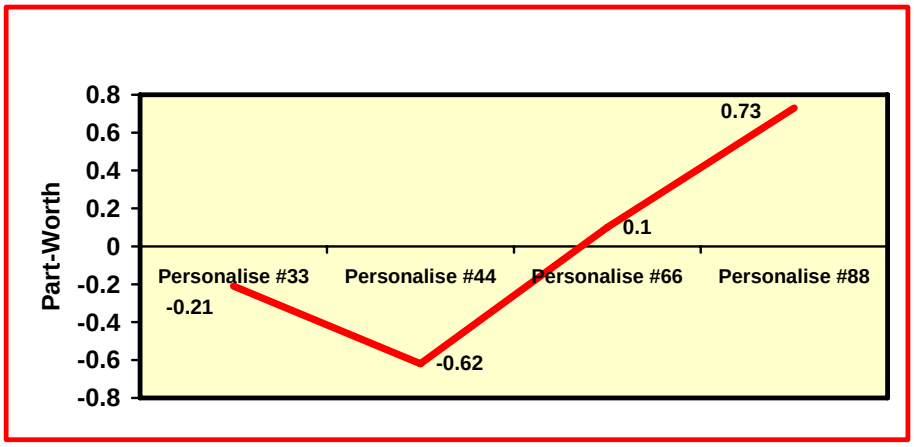

FIGURE 4.11: Part-Worth Utilities - Personalised Car License Plates

Figure 4.11 suggests the same ordering for personalised license plates. Indeed, the dislike for the number 44 was even more evident in this context, even when compared to the number 33. The much greater preference for the number 88 was also clear in this context.

The results obtained have face validity as the part-worth utilities obtained were as expected. For example, a basic design was not preferred, but a lower than average price was preferred. However, the key issue in the present context was the relative importance attached to the numeric attributes. In conjoint analysis, the relative importance of an attribute is determined by the difference from the least preferred level to the most preferred level for that attribute compared to the sum of these differences across all of the attributes. The results of these calculations are shown in Table 4.3. As the calculations were undertaken at an individual level, the means and standard deviations for each attribute are shown.

TABLE 4.3: The Relative Importance of the Five Car Attributes

Attribute	Mean	Standard Deviation
Price	20.23	10.85
Features	25.69	12.27
Model Number	14.87	5.90
Personalised Number	21.39	11.89
Design	17.82	9.15

Table 4.3 suggests that features had the biggest impact on respondents' evaluations of cars. However, all of the attributes were reasonably important as the average relative importances ranged from 14.87 (model number) to 25.69 (features). The standard deviations were reasonably high, suggesting there was a reasonable variation in the importance respondents attached to the various car attributes, making the subsequent analysis of the differences in the importance attached to the numeric attributes of considerable interest.

The same analysis was undertaken on the responses obtained from people who had answered the mobile phone questions. The results obtained are presented in the following diagrams.

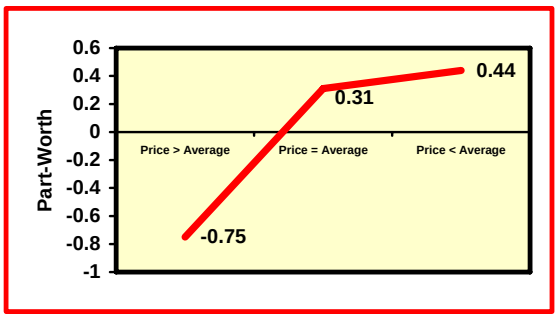

FIGURE 4.12: Part-Worth Utilities – Phone Prices

Figure 4.12 looks very similar to the part-worth utilities obtain in the car context, as an above average price had a negative utility, while a below average price had a positive utility, but the drop from below average to average was much gentler than the drop from average to above average. Again it would appear that having an above average price had a bigger negative impact than a below average price had a positive impact.

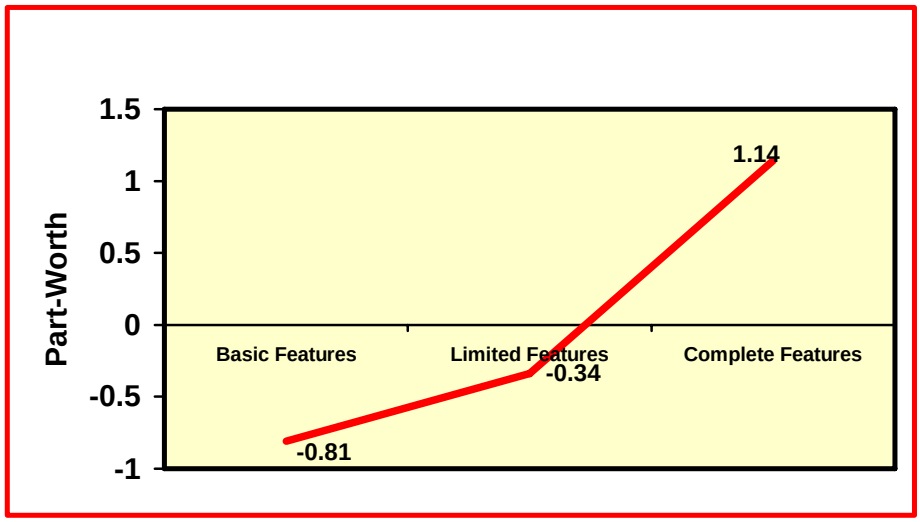

FIGURE 4.13: Part-Worth Utilities - Phone Features

Figure 4.13 also looks similar to the result obtain in the car context. There was a slight increase in the value of a phone that had limited features compared to one that had basic features, but a large increase from a phone with limited features to one that had complete features. Producers should consider the wisdom of a limited featured phone as it adds little value, but is likely to add to the costs of production, reducing profitability.

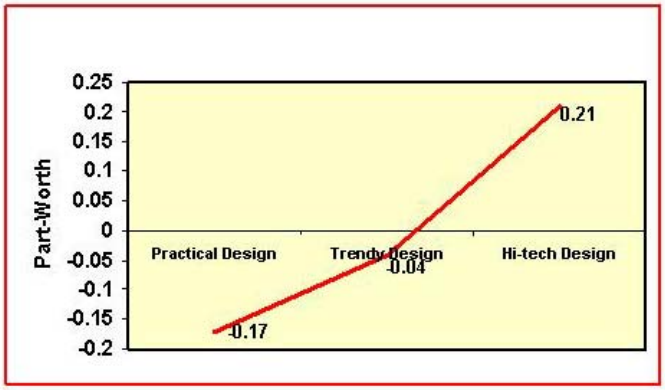

FIGURE 4.14: Part-Worth Utilities - Phone Design

Figure 4.14 suggests a high tech design was most preferred and that a practical design was least preferred. A trendy design falls in between, although closer to the practical design than to the hi-tech design.

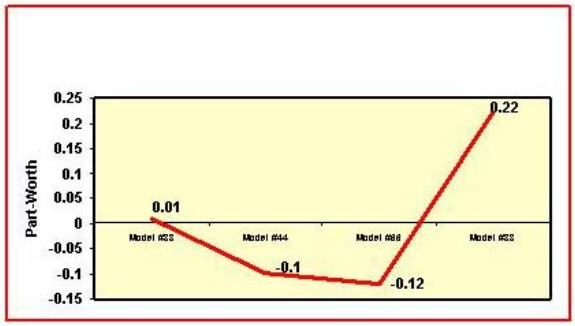

FIGURE 4.15: Part-Worth Utilities - Phone Model Number

Figure 4.15 suggested an interesting outcome. Like the earlier results for the cars, the number 88 was the most preferred. However, model 66 fared no better than model 44. This may be due to the large number of Christians who may have associated the number 66 with the number 666, which according to the Bible is the Devil's number, or the number of the Beast in Revelations. Clearly, the number 8 remained the most preferred of the various numbers.

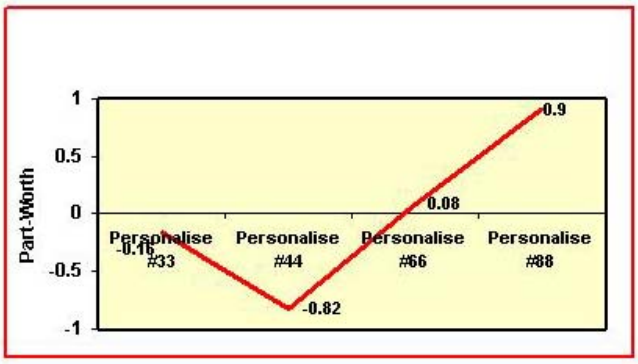

FIGURE 4.16: Part-Worth Utilities - Phone Personal Number

Figure 4.16 estimated the part-worth utilities for personalised phone numbers on a mobile phone. Again it was clear that the number 44 was the least preferred and that the number 88 was the most preferred, with the other numbers falling in between these two extremes.

As with the cars, the relative importance of each attribute was calculated and the results obtained are shown in Table 4.4. Features, once again, were the most important of the attributes (25.96) but, in this case, design was the least important attribute (14.11). As with the cars, all of the attributes had reasonable relative importance scores and there were reasonable standard deviations, suggesting variation in the importance people attached to the attributes was likely to provide useful information.

TABLE 4.4: The Relative Importance of the Five Phone Attributes

Attribute	Mean	Standard Deviation
Price	20.96	11.39
Features	25.86	13.69
Model Number	14.52	6.89
Personalised Number	24.55	14.40
Design	14.11	8.62

RELATIVE IMPORTANCE COMPARISON - CARS AND MOBILE PHONES

Figure 4.17 provides a comparison of the relative importances in the car and phone contexts. The results are clearly similar, suggesting that numeric impacts may be general, rather than context specific.

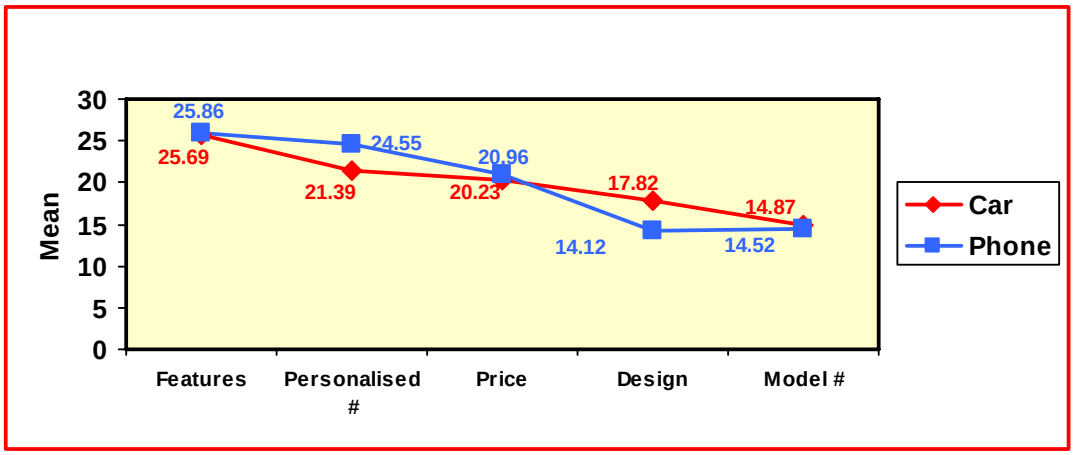

FIGURE 4.17: Attributes importances - cars and mobile phones

As the basis of the thesis was related to numbers, it was important to also determine if the relative importance of model numbers and personalized number were statistically different from each other. Since t-test judges the difference between their means relative to the spread or variability of the

scores, a series of t-tests were conducted to compare the results obtained in each group (i.e. the telephone and car groups).

The aim was to establish the similarity of the relative importances of the number attributes. The t-tests for the relative importance (i.e. model number and personalised number) were 0.42 and -1.84 respectively; neither of which was significant at the five percent alpha level. From the t-test results, it was also easy to determine the difference between the group mean over the variability of the groups. Thus, while the importance attached to a personalised telephone number was higher, the difference was not significant, supporting the earlier suggestion that numeric impact seem to be general, rather than context specific.

A similar analysis was undertaken to see whether the value attached to the number attribute levels included in the study (i.e. the numbers 3, 4, 6 and 8 that were used for both model numbers and personalised numbers) differed across context. In this case none of the t-statistics, which ranged from 0.24 to 1.83, were significant at the five percent level, again suggesting the impact numbers were general and not context specific.

As can also be seen in Figure 4.16, the conjoint analysis suggested that all of the attributes included were of importance in both the car and the mobile phone contexts. Further, while the number attributes were not the most important attributes, different numbers did add to or subtract from the value of a car or a mobile phone. The standard deviations of the relative importance scores also suggested that there were variations in the importance people attached to numbers. Consequently, the analysis moved to an assessment of potential

reasons for such differences by examining the various hypotheses that were suggested in Chapter Three.

Until this stage, the data collected for mobile phone and car were analysed independently. Given the similarity of the results in both contexts, as already discussed, the two data groups were then combined for further analysis hereafter as an overall sample discussed in the following section.

AN EXAMINATION OF THE VARIOUS HYPOTHESES

A number of hypotheses were outlined in Chapter Three and the various analyses undertaken to see whether they were supported in the present study are discussed in turn in subsequent subsections. A total of ten hypotheses were advanced, but they can be clustered as follows:

- *H1* and *H2* addressed the impact that numbers have on value perceptions (Ang 1997).
- *H3, H3a* and *H3b* examined the relationship between numbers and superstition.
- *H4* suggested that age influences the perception of numbers.
- *H5* suggested that education impacts perception of numbers.
- *H6* examined the impact of language spoken at home on the perception of numbers.
- *H7* examined the impact of religion on the perception of numbers.

- *H8* examined the impact of gender on the perception of numbers.

The hypotheses are discussed in turn in the following sub-sections.

Hypotheses 1 and 2

H1: The presence of the number 8 in a product's sub-brand will have a positive impact on value perceptions.

H2: The presence of the number 4 in a product's sub-brand will have a negative impact on value perceptions.

Hypotheses 1 and 2 suggested that some numbers had an impact on consumers' value perception by adding or subtracting value, with the number 8 seen as likely to have a positive impact (*H1*) and the number 4 as likely to have a negative impact (*H2*). Since part-worth utility scores are estimated for each respondent, a positive part-worth suggests a positive impact, while a negative part-worth suggests a negative impact. From the results obtained for both the mobile telephone and car (shown in Table 4.5), it is clear that the two numbers did impact differently on value perceptions, with the number 8 having the most positive impact and the number 4 having the most negative impact.

TABLE 4.5: Part-worth utility scores for the numbers 4 and 8

		NUMBER 4	NUMBER 8
PERSONALISED #	**Car**	-0.62	0.73
	Mobile Phone	-0.82	0.90
MODEL #	**Car**	-0.05	0.07
	Mobile Phone	-0.10	0.22

Hypothesis 1 and Hypothesis 2 were accepted, providing support for Ang's (1997) suggestion that numbers play a role in Chinese consumers' decision-making processes.

Hypothesis 3

H3: More superstitious people will attach greater importance to sub-brand numbering.

H3a: The more superstitious a Chinese consumer, the greater will be the positive impact of the number 8.

H3b: The more superstitious a Chinese consumer, the greater will be the negative impact of the number 4.

Hypothesis 3 suggested that the importance of numbers is associated with a consumer's superstition. The analysis was extended to look at the impact superstition had on the impact of the numbers 8 and 4 (*H3a* and *H3b*). As the hypotheses looked at bivariate relationships, they were examined by computing the relevant correlations. The correlation between superstition and the importance attached to personalised numbers was 0.33, while the correlation between superstition and the importance attached to model numbers was 0.20, both of which were significant well beyond the one percent level. Thus, support was found for Hypothesis 3.

While it was clear that superstition affected the value attached to numbers in a sub-brand extension, bivariate tests were conducted on the two numbers of interest (4 and 8) to determine its impact on these specific numbers. From

Table 4.6, it can be seen that the correlation between superstition and model numbers were not significant, regardless of whether the numbers were 4 or 8, although the number 8 had a slightly higher correlation than did the number 4, it was still not significant.

However, the number 4 had a significant negative correlation (-0.35) with personalised numbers, suggesting that the more superstitious the person, the greater was the negative impact of the number 4 and, therefore, the more likely it was that the person would avoid the number. Surprisingly, there was not a significant correlation between superstition and the personalised number 8. While *H3a* was not supported, *H3b* was supported, but only for the number 4. One other possible explanation is that the number 4 is generally regarded to be associated to death in most dialects like the Cantonese, Hokkien, Teochews and Mandarin (Table 2.1) and thus have greater negative impact while the number 8 is generally significant to the Cantonese and the Mandarin speaking consumers, resulting in less number of the respondents being particular over the number 8.

TABLE 4.6: Correlations between superstition and the numbers 8 and 4

	Model #88	**Model #44**	**Personalised #44**	**Personalised #88**
Correlation	0.05	-0.00	-0.35*	0.07
Sig. (2-tailed)	0.46	0.96	0.00	0.31
N	237	237	237	237

* Correlation is significant at the 0.01 level

A median split was used to separate high and low superstitious respondents and the differences in the two groups' reactions to model numbers with #88,

model numbers with #44, personalised numbers with #44 and personalised numbers with #88 were examined. Independent sample t-tests were used for this purpose and found there were no differences between the groups' reactions to models with #88 numbers (t=0.85, p=0.40) or to personalised #88 numbers (t=0.39; p=0.70), supporting the earlier suggestion that the number 8 did not have a greater positive impact on superstitious Chinese than it did on non-superstitious Chinese. The t-tests suggested that the two groups had similar reactions to model numbers with #44 numbers (t=0.76; p=0.45), but very different reactions to personalised #44 numbers (t=4.27; p=0.00), supporting the earlier suggestion that the more superstitious a Chinese consumer, the greater will be the negative impact of the number 4 for personalised attributes (i.e. plates or phone numbers in this case).

Hypothesis 4

H4: Older people will attach greater importance to sub-brand numbering.

Hypothesis 4 suggested numbers are more important to older people as they are more likely to recall and be concerned about such numbers, therefore placing more importance on sub-brand numbering as measured according to the age bracket mentioned in Appendix 1 and shown in Figure 4.1. Again correlation coefficients were computed between age and the importance attached to personalised numbers and model numbers. In this case, the correlations were 0.02 and 0.04 respectively, suggesting that age did not influence the importance Chinese consumers attach to numbers. Thus, hypothesis 4 was not supported.

Respondents were again separated into two groups (aged less or equal to 30 years or older than 30 years) as this split provided reasonable numbers in both categories (77 and 160 respondents respectively). The t-tests in this case suggested some differences when the model had a #88 number (t=-2.14, p=0.03) or a #44 number (t=2.80; p=0.01), but this not so for personalised #44 numbers (t=1.42; p=0.16) pr personalised #88 numbers (t=-0.28; p=0.78). It seems that older Chinese consumers do react differently to numbers, but only for model numbers, with older consumers being more positive about models with the number 8 included and more negative about model with the number 4 included.

Hypothesis 5

H5: Less educated people will attach greater importance to sub-brand numbering.

Hypothesis 5 suggested that education affects a Chinese consumer's perception of numbers as a less educated a person is more likely to attach importance to numeric aspects. Correlation coefficients were computed between education and the importance attached to personalised numbers and model numbers. In this case, the correlations were -0.01 and 0.01 respectively, suggesting that education did not influence the importance Chinese consumers attach to numbers. Thus, Hypothesis 5 was not supported.

Respondents were split into those holding university degrees and who did not, which led to 181 respondents in the "degree" group and 56 respondents in the "non-degree" group. Non of the independent sample t-tests in this case were

significant [#88 model numbers (t=-0.98; p=0.33); #44 model numbers (t=-0.90; p=0.37); personalised #88 numbers (F=-1.11; p=0.27); and personalised #44 numbers (F=-0.30; p=0.77)]. This further confirmed the earlier suggestion that less well educated Chinese consumers did not react differently to sub-brand numbering then better educated Chinese consumers.

Hypothesis 6

H6: People who do not speak English as their usual home language will attach greater importance to sub-brand numbering.

As was noted earlier in the present Chapter, respondents spoke English, Mandarin and a variety of Chinese dialects at home. In order to test Hypothesis 6, respondents were grouped into those who spoke English at home (70% of the sample- 166 respondents) and those who did not (30% of the sample – 71 respondents). Independent sample t-tests were used to examine the importance attached to personalised numbers and model numbers. In both cases, the non-English speaking group attached more importance to personalised numbers (24.04 compared to 22.49) and model numbers (15.70 compared to 14.26). However, the t-statistics (0.82 and 1.59 respectively) were not significant even at the ten percent level, suggesting that the main language at home did not impact significantly on the relative importance attached to personalised numbers or model numbers. Thus, Hypothesis 6 was not supported.

Hypothesis 7

H7: Chinese who are Christians will attach less importance to sub-branding numbering

Hypothesis 7 suggested that, since Christianity opposes superstition, it is likely that Chinese believers will attach less importance to personalised numbers and model numbers. T-tests were also used to test Hypothesis 7 as two groups (Christians, making up 62% of the sample, and others, making up 38% of the sample) were examined. Christian respondents placed less importance on personalised numbers (22.04 compared to 24.47) and model numbers (13.43 compared to 16.80). The t-statistics in this case were 1.37 and 4.05 respectively. Thus, there was a significant difference in the model number case, but not in the personalised number case, suggesting only partial support for Hypothesis 7.

Hypothesis 8

H8: Women will attach greater importance to sub-branding numbering.

Past studies have indicated that women are more superstitious than men, thus *H8* suggests Chinese women will attach greater importance to personalised numbers and model numbers. T-tests were used to test Hypothesis 8 as two groups (women, making up 45% of the sample, and men, making up 55% of the sample) were examined. Females did place more importance on personalised numbers (23.68 compared to 22.39) but placed less importance on model numbers (14.53 compared to 14.83). The t-statistics in this case

were 0.36 and 0.72 respectively, which were not significant even at the ten percent level, suggesting gender did not impact on the relative importance attached to personalised numbers or model numbers.

CONCLUSIONS

In the present chapter, the data were analysed to see the impact the various attribute and attribute levels had on perceived value and each of the hypotheses were examined. While respondents did not feel they were superstitious, their trade offs estimated through the conjoint analysis suggested a preference for the number 8 over the other numbers while the number 4 was seen as having a negative impact on perceived value.

While an English-speaking Christian graduate may not acknowledge being superstitious, common Chinese superstitions entwined with cultural beliefs may have been instilled during upbringing, leading to the present outcome. A further explanation could be that, since the Chinese consumers were surveyed live in a “collective” society, their decisions are often the result of influence from a wide group of people. Therefore, if it was a societal norm to be superstitious, an individual may conform to what the society expects, regardless of whether the individual was superstitious or not.

Such influences that indirectly affect decisions were noted in the focus groups. Participants suggested that non-superstitious individuals may make purchase decisions with superstitious beliefs in mind in the hope of a better resale value, especially when the subsequent buyer may be superstitious.

In the next chapter, the findings provided in the present chapter are discussed. The chapter also looks at the managerial and academic implications of the results and suggests areas in which further research would be desirable.

CHAPTER 5

CONCLUSIONS

In the previous chapter, the results obtained from analysing the data that were gathered within the present study were outlined and the various hypotheses suggested in Chapter Three were examined. It was interesting to note that out of the ten hypotheses formulated, three were supported, two were partially supported and five were not, as outlined in the next section. In the present chapter, the conclusions that were drawn from these results were discussed, addressing the value of the findings to marketers targeting Chinese consumers are examined.

HYPOTHESES SNAPSHOT

H1**: If a product has the number 8 as part of its sub-brand, this will have a positive impact on value perceptions. –* ***Supported

H2**: If a product has the number 4 as part of its sub-brand, this will have a negative impact on value perceptions. –* ***Supported

H3**: The more superstitious a Chinese consumer, the greater will be the importance attached to numbers. –* ***Supported

H3a**: The more superstitious a Chinese consumer, the greater will be the positive impact of the number 8. –* ***Not supported

H3b**: The more superstitious a Chinese consumer, the greater will be the negative impact of the number 4. –* ***Partially supported

H4**: Older people will attach greater importance to numbers when assessing a product's value. – **Not supported

H5**: Less educated Chinese consumers will attach greater importance to numbers when assessing a product's value. – **Not supported

H6**: People who do not speak English as their usual home language will attach greater importance to numbers when assessing a product's value. – **Not supported

H7**: Chinese Christians will attach less importance to numbers when assessing a product's value. – **Partially supported

H8**: Women will attach greater importance to numbers when assessing a product's value. – **Not supported

SUMMARY

The objective of the present study was to improve our understanding of Singaporean Chinese consumers' responses to numeric sub-branding. The study examined several common issues that have been raised about the role numbers (especially the number 4 and the number 8) play in Chinese culture and superstition and the impact they have on consumers' perceptions of the value of products they might purchase.

Hypotheses one and two were supported, suggesting that Chinese consumers attach value to the number 8 and the number 4. Several prior studies [Ang, 1997 #8[Too, 1997 #123[Lip, 1992 #25] had shown that the number 8 has a positive impact, while the number 4 has a negative impact and this was true in

the present case as well. It seems that Chinese consumers homophonically interpret numbers and associate them with the meaning of similar sounding words. A word that has similar pronunciation to another word with positive meaning is likely to be associated, while the reverse is true for numbers that have a similar pronunciation to words with a negative meaning.

This may explain Chinese consumers' behaviour towards the Alfa 164, although it is not known if sales improved after the model was changed to the Alfa 168. The present study suggests more superstitious Chinese consumers would avoid purchasing a car that will bring them ill fortune. In the Alfa 164's case this was death as "164" can be interpreted as the "road to death" in Cantonese, Mandarin and Hokkien. On the other hand, the revised Alfa "168" is associated with "road to prosperity" since the "8" is coupled with "wealth".

Hypothesis Three, which suggested the importance attached to numbers was associated with superstition, was also supported. A further analysis was conducted to see whether the negative impact of the number 4 was greater for more superstitious consumers. It was found that there was a significant negative relationship for personalised number, but not for model numbers.

A possible explanation for the different relationships for personalised numbers and model numbers is that Chinese consumers perceive such numbers differently. Personalised numbers are directly associated with an owner and can be controlled, whereas a product's model number is not controllable in the same way. The more direct control a consumer has, the greater the importance the superstitious consumers will place on personalised numbers, as was reflected in the correlations between superstition and the importance

attached to personalised numbers (0.33) and the importance attached to model numbers (0.20).

This also explains why items such as license plates, telephone numbers and house numbers, which can be personalised, are so highly prized by superstitious Chinese consumers and are of greater importance than are model numbers or other numbers that have no direct association with the owner.

Interestingly, while the number 8 had a positive impact on value perceptions (*H1*), superstitious Chinese consumers did not attach any greater value to the number 8 (*H3a*) than did their less superstitious counterparts. Singaporean Chinese, in general, will attach greater significance to the number 8, regardless if they were superstitious or not. Underlying reasons could be due to peer pressure, societal influence and financial considerations which were highlighted during the focus group.

From this finding, it seems that Chinese will avoid the number 4 or numbers that will bring ill fortune but may not necessary embark to pursue the number 8 or numbers that will enhance one's fortune standing. The need to prevent any misfortune is more daunting and thus explains again why Alfa 164 was shunned by Chinese, and avoiding any possible "road to death". From this finding, one can establish that changing the number to "168" will make the car more acceptable but

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One suggestion made to explain why the number 4 had a greater impact as compared to the number 8 was that the association of "death" with the number

4 is across several dialects like Mandarin, Cantonese, Teochew and Hokkien while the number “8” appeals to mainly the Cantonese and Mandarin speakers for its association with “prosperity”.

Hypothesis Four, which suggested older consumers would attach greater importance to numbers, was not supported. Older Chinese consumers were no more concerned about numbers than their younger counterparts. It seems that concerns about having to differentiate between older and younger Chinese consumers are unfounded, at least on this issue. This is an important note as many Chinese countries are aging rapidly and have “graying” populations. China is expected to have 265 million people older than 65 by 2020, while countries such as South Korea, Thailand, Taiwan, Singapore, and Hong Kong will have median ages of more than 40 (Engardio & Matlack, 2005). Indeed, Singapore’s Minister for Manpower, Dr Ng Eng Hen, noted that, by 2015, most Singaporeans will be over the age of 50 (Ng, 2005). With this finding, marketers targeting aging Chinese markets need not be too concerned about numbers and age, but rather pay attention to how numbers affect Chinese consumers as a whole.

As noted in Chapter Flour, the Singapore Department of Statistics has pointed out that English-speaking Chinese were often better educated Christians. Chinese consumers fitting this profile were thought to be less likely to attach significance to numbers. However, neither education (*H5*) nor the language spoken at home (*H6*) had an impact on the importance attached to numbers. Chinese Christians did place less importance on model numbers but not on personalised numbers.

It was also suggested that women were likely to place greater importance on numbers than their male counterparts. However, in the present study this was not the case as there was no significant relationship between gender and the importance attached to numbers.

In summary, it was evident that the background differences of Singaporean Chinese were not much related to numbers. Despite the respective demographic variations, the outcome demonstrated distinctive behavioural pattern to the numbers 4 and 8, which hopefully can be used as a starting point for other Chinese populations. If the Singapore Chinese population and any other Chinese population across Asia share similar traits due to historical, cultural and geographical proximity, the findings may prove valuable insights to marketers developing products targeted for the Asian region.

MANAGERIAL AND MARKETING IMPLICATIONS

Asia is a market too large for companies and marketers to ignore. With many of the countries in Asia having significantly large Chinese population like China, Taiwan, Hong Kong, Singapore, while markets like Vietnam, Philippines, Thailand, Indonesia and Malaysia also have relatively huge Chinese communities, the business and market potential of any products can be drastically affected if certain behavioural cues are ignored.

While many marketing and branding strategies are formulated at the head office of many multinational companies located somewhere in the West, international brands must be able to withstand the cross-cultural acceptance to be deemed truly global, especially in Chinese societies. The best way for

anyone to fully understand any culture and beliefs is to be fully immersed into it. This often takes time, which not many marketers have. Often than not, the strategies are formulated by marketers who may not have had to opportunity to step foot into a dominant Chinese community.

The Chinese community seems to be immersed in superstition, although it is more evident in some markets than others. The level of superstition within a Chinese society can be observed through the lives of the people. For example, in Hong Kong, superstition and “feng shui” (Geomancy) are part-and-parcel of the daily lives of the Hong Kongers, and it is not uncommon to find developers omitting the fourth and fourteenth floors in a buildings or business or home owners having “feng shui” masters at important events. The degree of superstition and how significant numbers are to the Chinese can be directly associated to how much it revolves around the daily lives of the individual. Such an ostentatious flaunting of superstitious practices highlights the need for marketers to observe numeric sub-branding to ensure the success of their products in such markets. However, even in markets where such cues are not obvious, such as Singapore, there is still a need to take account of these issues. While many of the Singaporean Chinese respondents in the present study claimed they were not superstitious, their actions proved otherwise. Many indicated a preference for the number 8, while disliking the number 4. While the study focused on Singaporean Chinese, their forefathers came from China and still hold the same behavioural traits as other Chinese in the region. However, this needs further investigation to see whether Chinese markets are superstitious and are likely to pay attention to numbers because cultural

heritage and beliefs, although adapted in different countries, have not been diluted across the borders.

The objective of the present study was to provide a better understanding of the impact of numeric sub-branding in Chinese markets. The Singapore Chinese respondents highlighted the importance numbers played in estimating the perceived value of a product. While the study was restricted to Singaporean Chinese consumers, the findings may be relevant outside Singapore. The results obtained might explain reports and articles that document Chinese behaviour, such as paying great sums of money for phone numbers that contain many 8s. Clearly, marketers need to understand the impact that numbers have on Chinese consumers and the results suggest international marketers need to pay attention to the number 4 and the number 8 as they create negative and positive value perceptions respectively.

While the study confirmed the perceived value of numbers and the relationship with superstition, it seemed that demographic background had little impact on the value attached to numbers. Background factors, such as age, gender, education level and the language spoken at home, had no impact on the importance attached to numbers. Therefore marketers need not be too concerned that a Chinese population with a high literacy rate will differ from one with a low literacy rate insofar as the perceived value of numbers is concerned. Similarly, marketers need not be overly concerned about re-branding products because of aging Chinese markets. Regardless of age, gender, education level and the language spoken, the marketing implication is that the impact of the number 4 is negative, while the impact of the number 8 is positive.

However, marketers need to pay attention to religion as Christianity has an impact on the perceived value for numbers. Chinese Christians placed less importance on numbers than did their non-Christian counterparts. It may be worthwhile for marketers to determine if the intended Chinese market has a large Christian group. If so, product branding may be more universal and that Western strategies can also be used in Christian-dominated Chinese markets.

In summary, the managerial and marketing implications of this study can probably be applied beyond Singapore because of the close geographical proximity and migratory trends of Chinese consumers. Chinese consumers across the globe have similar views about numbers due to their close cultural roots and beliefs. Strict observation of the numbers in branding may be necessary in Chinese-dominated markets such as Singapore, Hong Kong, Taiwan and even China.

The fundamental basis of the value perception of numbers is driven by the Chinese consumer, but may be diluted by other influences, such as Christianity, but not necessarily by education, age, gender or the language spoken. Marketers should formulate a global branding strategy that is sensitive to Chinese markets so as to avoid unnecessary future problems.

CONCLUSIONS

The notion of a homogeneous global market may seem desirable to many companies. However, the global market can never be truly homogeneous because consumers' expectations, perceptions and behaviours differ. In addition, differing standards and regulations mean that certain markets are

independent. Most British Commonwealth countries have right-hand drive cars while much of the rest of the world has left-hand drive cars. Mobile phones in different countries have different operating systems, such as GSM (Global System for Mobil communication) and CDMA (Code Division Multiple Access). Analogue television systems are incompatible across countries as the standards are divided into three main systems (NTSC (National Television System Committee), PAL (Phase Alternating Line) and SECAM (Sequential Couleur Avec Memoire or Sequential Colour with Memory). With the world moving from analogue to digital television transmission, markets have again split into three different standards:

1. ATSC (Advanced Television Systems Committee) in America and Korea.

2. DVB (Digital Video Broadcast) mainly in Europe and Asia.

3. ISDB (Integrated Services Digital Broadcasting) in Japan.

There is even a possible fourth standard for China.

These are just some examples that show that the world can never be truly global as equipment and devices cannot be manufactured and sold to different markets without going through extensive changes and modifications to suit relevant standards and, even more importantly, consumers' expectations, perceptions and buying behaviours. While globalization may be beneficial in many areas as discussed in Chapter 1, marketers must address branding, perceived risk and cultural issues at a local level.

Marketers must understand these expectations, perceptions and buying behaviour when considering sub-brand numbering, especially if superstitious beliefs within a culture affect value perceptions. Numbers, particularly 4 and 8, although unrelated to the quality of a product, may affect prices in Chinese markets and marketers must consider their impact. The constant challenge is to join the findings from this study to a global marketing brand strategy, or to strategies that target Chinese consumers.

While the present study was an attempt to provide marketers and companies with insights into Chinese consumers and the impact numbers had on value perception and behaviours, there were limitations and assumptions made to ensure that the study was manageable. These limitation, assumptions and opportunities are discussed in the final chapter.

CHAPTER 6

ASSUMPTIONS, LIMITATIONS AND EXTENSIONS

In the previous chapter, conclusions were drawn from the results obtained and suggestions were made on how they added value to organisations marketing to Chinese consumers. There were, however, some limitations to the present study and several assumptions were made to complete the research. These assumptions and limitations are discussed in the present chapter. Opportunities for further research are also examined**.**

ASSUMPTIONS

The Focus Groups

Focus groups were used to help develop the superstition scale. The numbers of participants in each group were sufficient for the groups to be effective. Originally five groups were planned, however, the focus group ceased after four sessions as very similar views about superstition and beliefs were found in each group, suggesting "saturation". The assumption made was that the findings would be similar for subsequent groups and thus representative of the Singapore Chinese population.

The Online Survey

The survey was conducted on the internet for convenience. While the survey was aimed at Singaporean Chinese consumers residing in Singapore, the use of the internet made it possible for people to assess and complete the survey, regardless of their geographic location. However, as the sample selection

started in Singapore, it was assumed that respondents were Chinese consumers residing in Singapore.

In addition, as the survey was conducted online, respondents had to be sufficiently computer literate to log onto the internet to access and complete the survey. If computer literacy is related to aspects of the present study (e.g. education) the data collection approach may have added some bias. The language used in the survey was in English, and assumption was made that those who understood English, which may also have added a bias to the results obtained.

Respondents

As conjoint analysis was the central analysis procedure used, it was assumed respondents were able to make valid trade-off between the various combinations of attributes presented. While the product profiles were hypothetical, it was assumed respondents were able to associate them with real-life scenarios and experiences.

LIMITATIONS

Computer Literacy

As the survey involves internet access, it requires the respondents to have some basic computer literacy. However, not everyone is computer literate, nor does every one have access to a computer. Moreover, people who are computer literate or who own a computer may have a very different profile to those who are not computer literate. Older Chinese people tend to be less

computer literate, while those without computer access or those who do not own a computer may come from lower income and education brackets. Indeed, 92% of the respondents in the present survey had at least a diploma and 82% were under the age of 40 years. The results obtained may have differed if the respondents were older or less educated.

Language

As noted earlier, cost considerations meant the survey was written in English. Perhaps as a result, 70% of respondents spoke English at home and may be different from those people who spoke a Chinese dialect instead. Therefore, results may differ if the survey was conducted in Chinese to address the non-English-speaking Chinese or have a higher percentage of respondents who do not speak English at home.

Conjoint Analysis

While there were many advantages to using Conjoint Analysis in the present study, there were some limitations as a result. For example, only a limited set of features could be used to ensure the number of combinations respondents were asked to assess were feasible. A conjoint information gathering process can be complex and it is assumed respondents have trouble choosing between packages that are described in terms of more than six to eight attributes (Green & Srinivasan, 1990).

Data Collection Approach

For the sake of convenience, respondents were invited to participate in the questionnaire through personal invitation. The number of respondents "snowballed" as each respondent was asked to contact their "circle of friends" to participate in the survey. While the intention was to gather samples of respondents with different profiles, the final respondent profile was similar to the researcher, suggesting the technique used did not have as good an effect as had been hoped. As a consequence there were fewer differences in people's backgrounds and this may have impacted on the lack of significance found in the assessment of many of the suggested hypotheses.

FUTURE RESEARCH

As noted earlier, the present study was confined to Chinese consumers in Singapore to ensure the project was manageable. Singapore has a large immigrant Chinese Population as approximately 15 percent of Chinese Singaporeans were born outside Singapore, with origins in Malaysia, Hong Kong and China and there is an opportunity for further research to see whether Chinese consumers in other countries (e.g. Malaysia, Hong Kong or China) have similar perceptions about the value of numbers as this would suggest such value perceptions can be generalised to Chinese consumers in other regions.

Singapore is a country that boasts a multi-racial and multi-cultural society. Close proximity to experience various cultures and interact with different races start at an early age, therefore the effect of acculturation and societal influence

on the behaviour of non-Chinese consumer (like Indians and Malays) in Singapore may be explored for future studies.

In the present study, mobile phones and cars were used as the products of interest. While the results were similar for cars and phones, suggesting that numeric impacts may be general rather than context specific, it would be useful to obtain data on other products, or even services, to see how general such value perceptions are.

Only the number 4 and the number 8 were used in this research, although the number 3 and the number 6 were included as benchmarks. While earlier studies had measured the perceived value of other numbers, other combinations and permutations of numbers that Chinese people believe have underlying meanings (Example “9413” is equated to “high probability of death” / ”nearly beyond help” [Chen, 1998 #224] or “54” equated to “never die”) should be examined to see whether particular combinations have more or less effect than the simple number combinations used in the present study.

Due to time, budget and availability of tool, the current design did not allow interaction, thus for future research, more complex tools may be used to further examine the attributes of the numbers and estimate their main effects.

CONCLUSIONS

Despite the limitations experienced in this study and the assumptions that were made to ensure the manageability of the research, the findings were nevertheless beneficial as they provided insights as to how the Singaporean Chinese perceive numbers and which demographic parameters would alter the

cultural and superstitious influence. As a fact, the findings provided the necessary explanations to several documented incidents to the peculiar behaviour of many Chinese, which suggest that the findings may be applicable in a broader sense to most Chinese, instead of just being confined to Singapore. The plausible explanation only demonstrated that it was necessary to pay close attention to numeric sub-branding in Asia.

While the assumptions and limitations highlighted the incompleteness of the findings, they also provide ample opportunities for future studies and further research. Even with the changing of the language medium to Chinese or altering the survey method to paper survey may provide contradictory or consistent results with respect to the same demographic parameters. Therefore, an extension to the current study is necessary with other products, markets, numeric permutation and demographic markers to ensure a more comprehensive understanding of the Chinese market is achieved. Nevertheless, marketers around the world cannot ignore the fact that superstitious and non-superstitious Chinese alike, the number 4 and 8 have significance influence to the perceived value of a product and must be treated with great sensitivity to ensure success in brand strategies addressing the Chinese consumer.

APPENDIX 1

THE FOCUS GROUPS

An initial attempt was made to obtain a Chinese superstition scale from Prof Ang Swee Hoon, who works at the National University of Singapore as prior research had suggested that such a scale might be available. Unfortunately, the scale was not available. Consequently, focus groups were undertaken to develop such a scale, as well as to examine qualitatively the likely impact of sub-brand numbering, and the present Appendix discusses these groups.

FOCUS GROUP OBJECTIVES

The objectives of the focus groups were to:

- Understand the nature of Chinese superstitions.
- Understand how Chinese perceived the relationship between Chinese superstition and numbers.
- Identify the relationship between numbers and buying behaviour.
- Understand the impact of numbers on cars and mobile phones.
- Identify the numbers that had greater significance to the Chinese.
- Understand the impact of numbers on the lives of Chinese.
- Develop a superstition scale for use in the present study.

Criteria were set to ensure those participating in the focus groups could provide relevant information for the development of the desired superstition scale. The two main criteria were that participants were Chinese and were aged between eighteen (18) and fifty-five (55) years. Participants were invited from all walks-of-life to ensure a spread in terms of views. Participants also came from a variety of religions, educational backgrounds, age groups, professions, genders and dialect groups.

THE TOPICS COVERED

Each focus group was designed to address the topics listed below. Approximately one hour was allocated for each session and sub-divided into the respective topics. A "set" time allocated for each topic to ensure all were adequately covered without extending the focus group session. The issues examined were:

- What make someone superstitious? (15 minutes)
    - What is a typical behaviour of a superstitious person?
    - What words would you use to describe superstitious people?
- Do you think there is any association between numbers and superstition? (15 minutes)
    - Which numbers? Why?
    - How important are these factors in people's decision making?

- When making a purchase of a car or a mobile phone, what aspects are important? (15 minutes)
    - Why are these aspects important?
    - How do they affect you?
- What factors did you consider when you last purchased? (15 minutes)
    - Do numbers affect your buying decision in anyway? If yes, how?
    - How do you think this impact affects your life?

THE APPROACH

A convenience sample of respondents was identified based on their willingness to participate. The aim was to have five (5) groups with between eight (8) and ten (10) participants in each group. A formal invitation was extended to potential participants, informing them of the purpose of the focus group, the duration of the session, the timing and the venue. About ten (10) potential participants were approached for each group. Follow-ups were made with invitees to confirm their participation. Any groups that had eight or more positive responses were deemed to be confirmed. If a group did not have the required minimum eight participants, further potential candidates were identified and invitations were sent to fill the required slots. The process was repeated until all of the groups had a minimum of eight participants. The initial groups identified were:

GROUPING	RELATIONSHIP	VENUE
GROUP 1	Colleagues	Company Boardroom
GROUP 2	Teachers	Staff Room
GROUP 3	Relatives	Home
GROUP 4	Friends	Clubhouse
GROUP 5	Associates	Clubhouse

Due to the outbreak of SARS in Asia, the focus groups were delayed, as many participants were hesitant to meet in face-to-face situations. Only when the SARS situation in Singapore became more stable and under control did participants agree to meet. As a result of the disruption, the focus groups were re-scheduled as shown in the following table.

GROUP	RELATIONSHIP	VENUE
GROUP 1	Employees of Tellabs Asia Pacific	Company's Boardroom
GROUP 2	Teachers at the Anglo-Chinese School	Staff Room
GROUP 3	Employees of Tellabs Asia Pacific	Company's Boardroom
GROUP 4	Employees of Bank of Tokyo – Mitsubishi	Home
GROUP 5	Employees of Reed Elsevier	Cancelled[1]

[1] The focus group was cancelled due to similar responses from the earlier groups.

THE GROUPS

Participants were invited to a relevant focus group discussion and the invitation included information about the group, including the general topic of the discussion (Superstition), the duration of the session (1 hour) and the venue (which varied for the different groups). Participants were also informed that their involvements were voluntary.

After the arrival of all participants, the moderator provided a brief introduction and encouraged participants to discuss Chinese superstition openly and to focus on the association superstition had with numbers. Key areas of focus were also provided in handouts to ensure that the participants stayed on track. Participants were also informed that the sessions were being recorded for reference and transcribing purposes.

The moderator initiated the first few questions as most, if not all, respondents were shy at the beginning of the session. Questions were asked to encourage discussion from all participants when necessary and, occasionally, to steer the discussion in line with the topics that needed to be addressed.

A profile of participants was obtained at the end of each session and their names, age, gender, race, dialect group, occupation, religion and education level were recorded for reference purposes. The breakdown of the profiles is as follow

AGE

<20	21~30	31~40	41~50	>50
1	6	21	2	2

GENDER

MALE	FEMALE
12	20

DIALECT GROUP

CANTONESE	HOKKIEN	TEOCHEW	HAINAN	HAKKA	CHAWAN
2	18	6	2	3	1

RELIGION

CHRISTIANITY	BUDDHISM	FREE THINKER	TAOISM
16	5	10	1

EDUCATION LEVEL

O LEVEL	A LEVEL	DIPLOMA	DEGREE	POST GRAD
1	4	3	23	1

A token of appreciation was given to participants to compensate them for their time and contribution.

As already noted, the sessions were recorded and transcribed verbatim. Responses from participants were categorised under the following categories:

- **A**: **A**ttributes – for characteristics and traits of superstition behaviour. This provided insights into peculiarity on how a superstitious Chinese would behave.

- **C**: **C**onsequences – for the actions and reactions of superstition behaviour. This provided clues on what superstitious Chinese believe as punishment or reward for their actions or inaction.

- **V**: **V**alues – for beliefs embedded within the Chinese culture. This provided background and influences that may instigate a superstitious Chinese to behave in a certain manner.

THE RESULTS

Background

All groups suggested that a person's background was the key determinant of superstitious behaviour. Respondents suggested that a person's background came from their culture, traditions, beliefs, upbringing, religion (especially Asian religions with a Chinese origin), fear, societal norms, experiences, peer pressure and exposure to such ideas.

Culture, beliefs, traditions, upbringing and societal norms were seen to be closely intertwined and to form the foundation of a person's superstitious beliefs. The way a person is brought up and the information he or she receives during the process was also seen as forming the basis of such beliefs. The more traditional and superstitious the upbringing, the more likely it was felt an individual would become superstitious in adulthood.

At a later stage influences such as religion, peer pressure, experiences, exposure and fears were seen as possibly altering or reinforcing such beliefs. Personal experiences were also seen to drive people to conform to society, while a fear of ill fortune was thought to provide a rationale for superstitious behaviours.

It was felt that a combination of foundation influences and later experiences determined people's superstitions. The stronger of the two was thought to dominate people beliefs, as shown in the following Table.

			FOUNDATION			
			SUPERSTITIOUS		NON SUPERSTITIOUS	
			VERY WEAK	VERY STRONG	VERY WEAK	VERY STRONG
INFLUENCES	SUPERSTITIOUS	VERY WEAK	SUPERSTITIOUS		Neutral	Not Superstitious
		VERY STRONG			Superstitious	Neutral
	NON SUPERSTITIOUS	VERY WEAK	Neutral	Superstitious	NOT SUPERSTITIOUS	
		VERY STRONG	Not Superstitious	Neutral		

Age, gender, education and dialect groups were also suggested as influencing superstitions, but these factors were not uniformly supported as there were opposing views.

Age was associated with experience and the argument was that, the older a person gets, the more superstition he or she becomes. The rationale was that

the more you go through in life, the more you experience things with no logical explanation, which is often interpreted as “luck”. An older person also has more to lose, and a preventive measure may be to adopt a superstitious approach to ensure the future is smooth sailing.

Gender was brought up as some participants argued that Chinese women were more superstitious than were Chinese men, although there was some strong opposition to this view. Interestingly, Mowen and Carlson (2003) also suggested gender might affect superstition as women had a stronger belief in astrology in their study.

Education was also mentioned as it was argued that a more educated person would make more rational judgements in making purchases. There were disagreements among the participants, however, as many had witnessed very well-educated people being very superstitious.

Different dialect groups were also identified and some suggested that Cantonese people was the most superstitious about numbers. However, since Chinese of different dialect groups live in such close proximity and many dialect groups are intertwined through marriages and upbringing, it was recognised that there was no clear distinction between such groups

The Numbers

All of the groups agreed that the number 4 and the number 8 had an impact on Chinese people. These two numbers were commonly identified as the extremes in the number line from zero (0) to nine (9). The number eight (8)

was regarded as an auspicious or lucky number, while the number four (4) was associated with death or bad fortune.

Since all of these numbers were subject to interpretation, other numbers were also discussed. The numbers 1, 2, 3, 5, 6, 7 and 9 all had own associations with auspiciousness and inauspiciousness. The numbers 2, 3, 6 and 9 were regarded as good numbers. The numbers 2 (“e”) and 3 (“sang”) sounds like “easy” and “life” in Cantonese respectively, while the number 9 (“jiu”) is often associated with “longevity”, derived from a Chinese proverbs “Chang Chang Jiu Jiu”. The number 6 sounds like “luck” in the Hokkien and Teochew dialects.

There were opposing views about the number 7. One was that the number 7 sounded like “to go” in Mandarin, which was interpreted as “to die”, while Christians’ view 7 as a good and perfect number since God made the world in seven days.

While numbers on their own have meanings, a combination of numbers often affects perceptions and behaviour. Such combinations must make sense based on how the numbers are being read. If the combination sounds auspicious, or includes many auspicious numbers, such as the number 8, people generally like it. The opposite holds true and people tend to avoid combinations that sound inauspicious, or have many inauspicious numbers, such as the number 4. People tend to be neutral about combinations that do not have such meaning until someone derives a meaning from it.

For the very superstitious, combinations of numbers are taken to another level. Any interpretation of a combination of numbers is made not only at a phonetic

level, but also through the summation of a combination. For example, “828” is a very good number for two reasons. Phonetically, the numbers sounds good and are associated with prosperity and easy fortune. In total, the sum of eight, two and eight equals eighteen (8 + 2 + 8 = 18), which can be interprets to “sure fortune”, and the sum of one and eight equals nine (1 + 8 = 9), which can be interpreted as “longevity”. Such interpretations are not common among the Chinese and are often restricted to those who believe in “feng shui” or geomancy, which is the study of the wind and the water.

Interestingly, Christians look at numbers somewhat differently. While the interpretation of the numbers is largely associated with how the combination of numbers sound in a relevant dialect and is usually circumstantial, Christians look at numbers literally in association with the Bible. For example, 7 is a good number as it is a complete number, while the number 666 is associated with the Devil.

The Influence of Numbers

The association to auspiciousness may be product and/or occasion specific. Simply put, Chinese consumers do not want to hex an occasion or product and would rather adopt a “better safe than sorry” attitude by having an auspicious number associated with a purchase.

For example, specific dates and time are usually chosen for auspicious occasions, such as weddings, moving in to a new home or even starting a new business. Many Chinese businessmen are also particular about when a

company commences work after the Chinese Lunar New Year holidays. Some companies take as many as fifteen days' break during this period.

The importance of the numbers seemed to vary with the types of products being considered. While price was still a major concern, with lower prices being preferred, some participants were willing to pay more for specific numbers, especially when purchasing expensive items or items that other would directly associate with the individual. Interestingly, the more expensive the item and/or if a product offered the option of a personalised number, the more cautious a participant was about its number combination.

Participants argued that, sometimes, superstitious behaviour was not due to superstitious beliefs, but was due to societal influences. Singapore is a collective society and social norms often drive buying decisions. If society pays attention to numbers, then many consumers will follow the norm.

It was also noted that many younger generation Singaporeans live under the same roof or in close proximity to their parents. The older people tend to be more conscious about traditions, superstitions and beliefs. This can have an impact on the buying behaviour of the younger generation. The younger generation takes into account of such beliefs and makes purchases in line with these concerns. Such consideration provides "peace-of-mind" not only to oneself, but also to other people, especially family. Interestingly, some argued that a low price may alter behaviour, although this was not always true.

Participants also felt it could be financially better to follow the norm, especially for bigger-ticketed items. Many non-superstitious Chinese were seen to adopt

a practical approach in their buying behaviour, especially for high investment items, and to make purchases that were generally accepted by society in the hope of obtaining good resale value. An apartment unit on the fourth floor with a unit number four may not obtain a good resale price while a unit on the eighth floor may command a premium. Thus, financial prudence may affect purchase choices.

Some Chinese also takes opportunities to flaunt their wealth. It was noted that mobile phones numbers, house numbers and car license plate numbers with auspicious numbers are purchased at very high prices. Owners tend to feel good if friends and relatives acknowledge such "special" numbers. This attitude can encourage others to follow suit. Gamblers and businessmen were singled out as being the most superstitious. Interestingly, the impact of superstition for both groups tends to be financially associated. The objective of gambling and doing business is to gain in terms of monetary value. Being superstitious and taking measures to avoid "bad luck" were seen to provide these groups with a "peace-of-mind".

Participants also noted that, for superstitious Chinese, a combination of numbers can have a psychological impact. Chinese may be too distraught to drive a car that has "death" tagged with it. It was unfortunate for Alfa that "164" was interpreted as the "road to death" as accidents involving such cars were seen as inevitable given the car's model number.

While the majority of participants felt most people conform to their society, there was recognition of another group that behaves independently, regardless

of what the society thinks. This group was thought to be younger, more independent, and often better educated.

In conclusion, Chinese were thought to be likely to adopt a “better be safe than sorry” approach. Given a choice, Chinese people were seen to be likely to avoid unlucky numbers as superstition is still very much a part of Chinese culture. Numbers and various number combinations remain neutral until a meaning can be imputed to that combination.

APPENDIX 2

THE WEB SURVEY

Dear Respondent

Thank you for logging on to this site. I am currently undertaking my doctorate at The University of Western Australia, in which I am looking at the way people make purchase decisions. I hope you are able to help out by taking part in this study and completing the questionnaire. The questionnaire aims to understand how cultural background, personal beliefs and education affect one's buying decision.

The questionnaire will collect information relating to your:

- Preference of choice
- Perception of numbers
- Demographic data

I thank you in advance for your participation. There are no right or wrong answers. It is your preferences and attitudes that I am interested in.

If you have any queries about the questionnaire or the study please don't hesitate to contact me on 9048-0088 or via email at don.dot@pacific.net.sg

Please note that I am interested in results as a whole. Individual responses will be kept confidential. All personal information collected will remain confidential and your name is not required. You will not be identified in any reports or published articles that result from this study.

Many thanks

Donald Tan

Voluntary participation or the right to refuse

Your participation is important to the success of this study. The higher the response rate, the more confidence we will have in the information collected. Nevertheless, your involvement in this study is voluntary, and you can decide whether or not to take part in the research.

The Human Research Ethics Committee at the University of Western Australia requires that all participants are informed that, if they have any complaints regarding the manner in which a research project is conducted, it may be given to the Chief Investigator, Professor Geoffrey Soutar, or alternatively, to the Secretary, Human Research Ethics Committee, Registrar's Office, University of Western Australia, 35 Stirling Highway, Crawley, WA 6009. All study participants will be provided with a copy of the Information Sheet for their personal records.

PLEASE ENSURE YOU ARE ABOVE 18 YEARS OLD IF YOU WISH TO PROCEED.

WOULD YOU LIKE TO PROCEED?

Do Survey

Below are a list of telephones that have different features. Please look at these models individually and place a check in the appropriate box according to how much you like that model with the described attributes. If you really like a model you should give it a 10. If you really dislike the model you should give it a 1. If your preference is somewhere in between, you should give it a value on the 1 to 10 scale that reflects this feeling.

MOBILE A	
Price	Above Average
Features	Complete
Model #	44
Phone Number	sXXX-8888
Design	Trendy

○ ◯ ○ ○ ○ ○ ○ ○ ○ ○
1 2 3 4 5 6 7 8 9 10
Least Desired — Most Desired

MOBILE B	
Price	Average
Features	Complete
Model #	44
Phone Number	sXXX-8888
Design	Trendy

○ ◯ ○ ○ ○ ○ ○ ○ ○ ○
1 2 3 4 5 6 7 8 9 10
Least Desired — Most Desired

MOBILE C	
Price	Above Average
Features	Complete
Model #	88
Phone Number	sXXX-6666
Design	Trendy

○ ○ ○ ○ ○ ○ ○ ○ ○ ○
1 2 3 4 5 6 7 8 9 10
Least Desired — Most Desired

MOBILE D	
Price	Above Average
Features	Limited
Model #	33
Phone Number	9XXX-4444
Design	Trendy

○ ○ ○ ○ ○ ○ ○ ○ ○ ○
1 2 3 4 5 6 7 8 9 10
Least Desired — Most Desired

MOBILE E	
Price	Above Average
Features	Complete

○ ○ ○ ○ ○ ○ ○ ○ ○ ○

Model #	44	1	2	3	4	5	6	7	8	9	10
Phone Number	9XXX-3333	Least									Most
Design	Practical	Desired									Desired

MOBILE F											
Price	Above Average										
Features	Limited	○	○	○	○	○	○	○	○	○	○
Model #	66	1	2	3	4	5	6	7	8	9	10
Phone Number	9XXX-8888	Least									Most
Design	Practical	Desired									Desired

MOBILE G											
Price	Average										
Features	Basic	○	○	○	○	○	○	○	○	○	○
Model #	33	1	2	3	4	5	6	7	8	9	10
Phone Number	9XXX-6666	Least									Most
Design	Practical	Desired									Desired

MOBILE H											
Price	Below Average										
Features	Complete	○	○	○	○	○	○	○	○	○	○
Model #	88	1	2	3	4	5	6	7	8	9	10
Phone Number	9XXX-4444	Least									Most
Design	Practical	Desired									Desired

MOBILE I											
Price	Average										
Features	Limited	○	○	○	○	○	○	○	○	○	○
Model #	88	1	2	3	4	5	6	7	8	9	10
Phone Number	9XXX-3333	Least									Most
Design	HI-Tech	Desired									Desired

MOBILE J											
Price	Below Average										
Features	Complete	○	○	○	○	○	○	○	○	○	○
Model #	33	1	2	3	4	5	6	7	8	9	10

Mobile Phone Survey

Phone Number	9XXX-8888	Least									Most
Design	HI-Tech	Desired									Desired

MOBILE K											
Price	Above Average										
Features	Complete	○	○	○	○	○	○	○	○	○	○
Model #	66	1	2	3	4	5	6	7	8	9	10
Phone Number	9XXX-6666	Least									Most
Design	HI-Tech	Desired									Desired

MOBILE L											
Price	Above Average										
Features	Basic	○	○	○	○	○	○	○	○	○	○
Model #	44	1	2	3	4	5	6	7	8	9	10
Phone Number	9XXX-4444	Least									Most
Design	HI-Tech	Desired									Desired

MOBILE M											
Price	Above Average										
Features	Complete	○	○	○	○	○	○	○	○	○	○
Model #	33	1	2	3	4	5	6	7	8	9	10
Phone Number	9XXX-3333	Least									Most
Design	Practical	Desired									Desired

MOBILE N											
Price	Above Average										
Features	Basic	○	○	○	○	○	○	○	○	○	○
Model #	88	1	2	3	4	5	6	7	8	9	10
Phone Number	9XXX-8888	Least									Most
Design	Practical	Desired									Desired

MOBILE O											
Price	Below Average										
Features	Limited	○	○	○	○	○	○	○	○	○	○
Model #	44	1	2	3	4	5	6	7	8	9	10
Phone Number	9XXX-6666	Least									Most

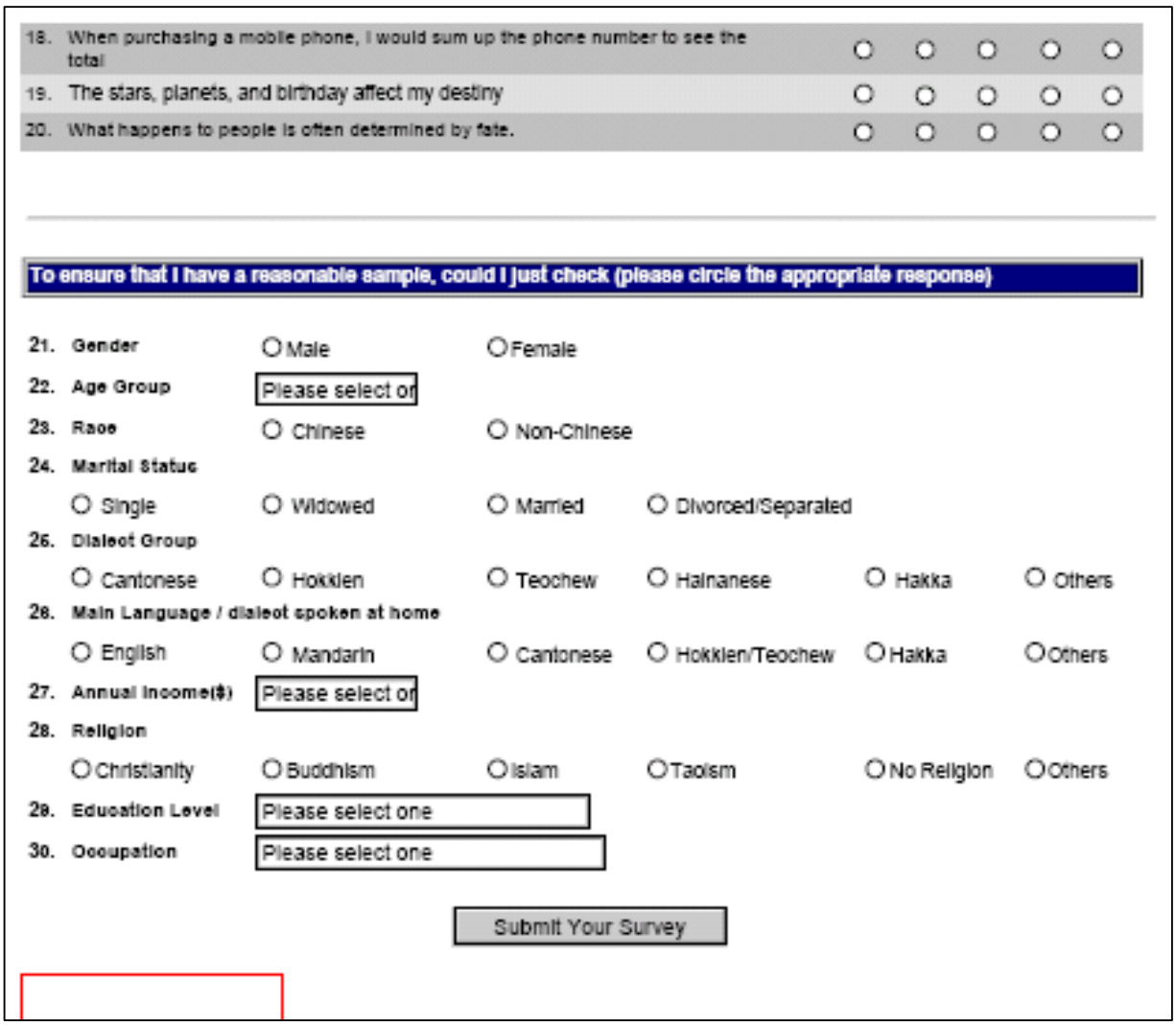
Design	Practical	Desired									Desired

MOBILE P	
Price	Average
Features	Complete
Model #	66
Phone Number	9XXX-4444
Design	Practical

○	○	○	○	○	○	○	○	○	○	
1	2	3	4	5	6	7	8	9	10	
Least Desired									Most Desired	

Please indicate how strongly you agree or disagree with each of the following statements by checking the appropriate circle next to each statement. If you strongly disagree, circle 1. If you strongly agree, circle 5. If your feelings are not so strong, circle one of the numbers in the middle. There are no right or wrong answers. Please tell us honestly how you feel and circle only one number on every line.

		Strongly Disagree				Strongly Agree
		1	2	3	4	5
1.	I think I am superstitious	○	○	○	○	○
2.	I choose phone numbers that are easy to remember	○	○	○	○	○
3.	I would pay more for a product if it is going to bring me good luck	○	○	○	○	○
4.	The stars can predict the future	○	○	○	○	○
5.	I determine my own fate	○	○	○	○	○
6.	Flower Horns (Luohan Fish) and Arrowanas (Dragon Fish) bring good luck	○	○	○	○	○
7.	Breaking anything during the Lunar New Year brings bad luck in the coming year	○	○	○	○	○
8.	Price has the biggest influence when making a purchase	○	○	○	○	○
9.	By Lunar New Year's day, all debts should be paid to avoid bad luck in the coming year	○	○	○	○	○
10.	I think numbers have meaning	○	○	○	○	○
11.	My personality is determined by my birth sign	○	○	○	○	○
12.	Sweeping the floor on Lunar New Year is unlucky.	○	○	○	○	○
13.	I would buy a house on the 4th floor	○	○	○	○	○
14.	I am concerned about how others perceive of me	○	○	○	○	○
15.	My birth date affects my future.	○	○	○	○	○
16.	I have little influence over the things that happen to me	○	○	○	○	○
17.	When buying a house, I would avoid certain unit number and/or floors	○	○	○	○	○



Age Group

1. <=20
2. 21~30
3. 31~40
4. 41~50
5. 51~60
6. >=60

Education Level

1. <= PSLE
2. = O Level
3. = Diploma
4. >= Degree

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