Celebrity Advertising and Source Credibility in Hong Kong

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Declaration

I hereby certify that the work embodied in this Dissertation Project is the result of original research and has not been submitted for a higher degree to any other University or Institution.

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Ying Che Ruth Kan  Date
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I would like to dedicate this dissertation to my parents, who have always believed in me and supported me, both financially and emotionally. Without their devotion, sacrifice and love, I would not have been able to travel the world and pursue my studies in European languages and culture. To my husband, Jerry, who has been a pillar of support to me throughout this DBA program with his love, understanding and constant encouragement.

Last but not least, as a communications professional and international marketer experienced in the use of celebrity advertising, I have found this research project to be both challenging and stimulating. Apart from contributing to the wide body of knowledge on celebrity advertising, I hope that the findings of this study will also inspire my counterparts in the industry.
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Abstract

Celebrity endorsement, or the use of celebrities in advertising, is a popular communication strategy used by marketers and advertisers around the world. Numerous studies had been conducted to ascertain the essential characteristics of an effective endorser and their impact on celebrity advertising. Ohanian (1990) developed a tri-component (attractiveness, trustworthiness and expertise) celebrity credibility scale and assessed the impact of the three dimensions on consumers’ purchase intention. The scale has been widely used in the U.S., but the limited research conducted in Asia has revealed both similarities and differences in consumers’ perceptions of and responses to celebrity credibility in Asia and the U.S. The present study aimed to test the applicability of the Ohanian scale in Hong Kong’s Chinese consumer market and develop a more comprehensive measurement of celebrity credibility. It also assessed the impact of the credibility dimensions on consumers through their purchase intentions.

An expanded five-factor celebrity credibility scale was tested through a questionnaire survey of 300 consumers intercepted in a popular location in Hong Kong. The results of the exploratory and confirmatory factor analyses supported the revised scale, with some variations for male and female celebrities. The results of the multiple regression analyses showed that ‘expertise’, which was found to be the only dimension affecting consumers’ purchase intention in Ohanian’s (1991) study, had no impact on the respondents. Unlike previous research, which had reported no noticeable differences in consumers’ responses to a female vs. male celebrity, the findings indicated that the dimensions influencing Hong Kong consumers’ purchase intention were the female celebrity’s attractiveness and trustworthiness and the male celebrity’s familiarity and likability. This study offers researchers and practitioners an effective celebrity selection tool and paves the way for further research on consumer responses to celebrity advertising in the expansive Mainland Chinese market.
CHAPTER ONE
INTRODUCTION

1.1 Background to this Research

Since its early beginning in the 19th century, celebrity endorsement, or the use of celebrities in advertising, has become a popular communication strategy employed by marketers around the world. In fact, celebrity advertising is one of the most popular advertising strategies used in today’s global marketplace (White, 2004). Recent growth of celebrity endorsement in the last few decades has been fueled by media technological advances which have eliminated national boundaries and expanded the influence of celebrities (Money, Shimp and Sakano, 2006). A widely accepted definition of a celebrity endorser is ‘any individual who enjoys public recognition and who uses this recognition on behalf of a consumer good by appearing with it in an advertisement’ (McCracken, 1989, p.310). The current study adopts this definition.

The increasing popularity of celebrity endorsement is well reflected in the vast amounts of advertising spending invested by companies. Celebrity endorsement is now a billion dollar industry (Kambitsis, Harahousou, Theodorakis and Chatzibeis, 2002). Enormous amounts of money are invested into celebrity endorsement contracts every year by marketers, who believe that celebrities are effective spokespeople for their products and brands (Hsu and McDonald, 2002). Companies invest heavily into endorsement deals which often run into millions of dollars (Schaefer, Parker and Haytko, 2011). Nike, for example, paid an estimated US$4 billion in 2009 to have some of the world’s top athletes represent its products (Miller and Laczniak, 2011).
Celebrity endorsement has become a universal phenomenon and a common practice in many countries outside the United States (Cutler, Javalgi and Lee, 1995). Market reports from countries around the world reflect the important role of celebrity endorsement in advertising (La Ferle and Choi, 2005). The latest estimate shows that celebrities are employed in nearly 20% of all advertisements worldwide (Shimp, 2007). Outside the U.S., celebrity endorsement is also widely used in countries such as Ireland, U.K., Japan, South Korea, India and China (Schaefer, Parker and Kent, 2010). In Japan, celebrities are featured in about 70% of TV commercials (Kilburn, 1998). The rapid economic growth and rise in consumption power over the last 15-20 years has also resulted in a significant increase in celebrity endorsement in other Asia-Pacific countries. In South Korea, for example, a study (Choi, Lee and Kim, 2005) on prime time TV advertising found that 59% of the commercials featured a celebrity, compared to 9.6% on American networks during the same time slots.

As in the U.S., celebrity endorsement is a key executional strategy in China which continues to gain popularity (Hung, Chan and Tse, 2011). Ranked as one of the world’s largest advertising markets, China has an annual advertising expenditure of over 100 billion Yuan (Song, Chaipoopiratana and Combs, 2008). The use of celebrity endorsement, particularly celebrity athletes, is commonplace in China (Tsang, 2009). Hung, Chan and Tse (2011) estimated that celebrities are used in 40% of youth product ads in China and that celebrity endorsement has become one of the most common strategies to gain brand awareness in the high-growth and intensely competitive Chinese market.
Increased investment in celebrity endorsement has given rise to a large amount of research, particularly in the U.S., on measures of endorser effectiveness such as the impact on consumers’ attitudes towards the ad, the brand and purchase intention (Amos, Holmes and Strutton, 2008). Celebrity endorsement research has its roots in the source effect theory of communication, which is founded on the belief that the persuasiveness of a message is significantly influenced by the characteristics of the communicator (Erdogan, 1999). Simmers, Damron-Martinez and Haytko (2009) suggest that most research has rested on two models: Hovland’s (1953) source credibility model, which believes in the multi-dimensionality of credibility, with ‘trustworthiness’ and ‘expertise’ as its two key dimensions, and McGuire’s (1985) source attractiveness model, which posits that components of ‘source attractiveness’ such as ‘familiarity’ and ‘likability’ affect the effectiveness of the message. Studies on celebrity credibility and celebrity attractiveness have formed therefore the cornerstone of the research on celebrity endorsement.

Research on celebrity endorsement has confirmed the importance of endorser source credibility for advertising effectiveness, in which celebrities are shown to exert their influences through their perceived credibility (Choi and Rifon, 2007). Main effect findings of fifty years of empirical studies have suggested that a high-credibility source is more persuasive than a low-credibility source in changing attitudes and gaining behavioural compliance (Pornpitakpan, 2004). A recent meta-analysis of celebrity endorsement literature shows that celebrity ‘trustworthiness’, ‘expertise’ and ‘attractiveness’ represent the three most influential source effects on purchase intentions, followed by ‘familiarity’ and ‘likability’ (Amos, Holmes and Strutton, 2008).
While endorser credibility continues to be one of the most frequently used methods in advertising to influence consumers’ attitudes and purchase intention (Lafferty, 2002), there is yet no agreement as to what constitutes celebrity credibility and what effect it has on advertising (Ohanian, 1990). To help provide a valid and reliable measurement of celebrity credibility, Ohanian (1990) developed a tri-component celebrity source credibility scale comprising the dimensions of ‘trustworthiness’, ‘expertise’ and ‘attractiveness’. The scale was validated and has been widely used in the U.S. (La Ferle and Choi, 2005). The factor structure of the scale has also been verified for the Singapore and Korean markets (Pornpitakpan, 2003a; La Ferle and Choi, 2005). Of the three dimensions, only ‘expertise’ had a positive impact on purchase intention in Ohanian’s study (1991), while a favorable impact was registered for all three dimensions in the studies conducted in Singapore (Pornpitakpan, 2003b) and Korea (La Ferle and Choi, 2005).

In view of the ever-growing importance of celebrity endorsement as a marketing communication strategy in China, there is an obvious need to identify the essential criteria for the selection of the ‘right’ celebrity to maximize effectiveness and minimize risk (Song, Chaipoopiratana and Combs, 2008). Limited research on celebrity endorsement and consumers’ responsiveness to celebrity advertising has so far been conducted in Asia, much less in China (Schaefer, Parker and Kent, 2010). One exception is a recent tourism study conducted in Guangzhou, which tested the Ohanian (1990) scale and resulted in the removal of the dimension ‘trustworthiness’ from the scale. While the authoritativeness of the Ohanian (1990) scale cannot be disputed, its applicability as a celebrity endorser selection tool in China is yet to be determined. The findings of Hall (1976) and Hofstede (1991) have highlighted the strong cultural
differences between the U.S. and Asian countries. Studies in Singapore (Pornpitakpan, 2003b) and Korea (La Ferle and Choi, 2005) have reflected differences in consumers’ responses to celebrity credibility versus the U.S. Hence a gap in the literature exists with respect to the appropriate endorser qualities and consumer responses to celebrity advertising in China.

To fill this gap, the validity of the Ohanian (1990) scale will be tested in Hong Kong, now an integral part of China. A cosmopolitan city like Hong Kong with a strong western influence is an ideal testing ground for theories and measures developed in the U.S. Like the U.S., Hong Kong is a highly materialistic and capitalistic market which encourages consumption (Tse, Belk and Zhou, 1989). Similar to the U.S., Hong Kong has a very highly-developed advertising industry and is the regional advertising capital of Asia (Ha, 1998). On the other hand, Hong Kong is geographically linked to China and has retained much of its Chinese culture and heritage. The previous study by Pornpitakpan (2003a) in Singapore using Chinese celebrity endorsers and a student sample has proven the validity of the scale in a similar market. However, as noted previously, a tourism study using a consumer sample in Guangzhou has proven otherwise (van der Veen and Song, 2010). Conducting a consumer study in Hong Kong can further assess the scale’s validity in the Chinese market as well as the potential generalizability of its application.

1.2 Research Problem and Objectives

The research problem addressed in this dissertation is:

The importance of celebrity advertising in Asia/China versus the lack of research to guide companies/managers calls for a better understanding of the essential
characteristics of a credible celebrity endorser and their effects on consumers’ responses to celebrity advertising. Although the tri-component Ohanian (1990) celebrity credibility scale has been widely used in the U.S., there is a need to further validate the scale in the Chinese market and to develop a more comprehensive measurement of celebrity credibility. Since the research findings on the impact of the various credibility dimensions on consumers’ purchase intention have been inconclusive, there is also the need to ascertain their effect on Chinese consumers. This includes the identification of potential differences in consumers’ responses to male vs. female credibility.

To investigate the research problem, the specific objectives of this research are to:

1. confirm the key dimensions of celebrity credibility in the Ohanian (1990) scale for the Hong Kong market.
2. develop a more comprehensive measurement of celebrity credibility by considering the inclusion of other dimensions of source attractiveness into the existing scale.
3. measure the effect of celebrity credibility through the impact of the credibility dimensions on Hong Kong consumers’ purchase intentions.
4. ascertain the potential differences in the impact of male credibility dimensions vs. female credibility dimensions on purchase intention.

1.3 Justification for the Research

This research is justified by the significance of its findings for the existing knowledge on celebrity advertising. It will make valuable contributions to celebrity endorsement research from a theoretical, methodological and practical perspective. Since the overarching purpose of the study is to develop a more comprehensive measurement tool
to aid celebrity selection to help maximize the cost-effectiveness of using celebrities in advertising, the implications of this research for business practice are particularly significant.

1.3.1 Theoretical contributions

This research will provide genuine insight into consumers’ perceptions of celebrity advertising in the high-growth Chinese market. Through a pioneering study conducted in Chinese in an integral part of China using a general consumer sample, it will help fill the gap in celebrity advertising research in one of the world’s largest advertising markets. Since most research in celebrity endorsement in Asia has used student samples, including the studies by Pornpitakpan (2003a, b) and La Ferle and Choi (2005), this study will shed light on the perceptions of a much wider cross-section of the Chinese-speaking community towards celebrity advertising. It will also pave the way for further research in the broader Mainland Chinese market.

As a follow-up to the studies by Ohanian (1991) and Pornpitakpan (2003b), this study will provide further insight into the effectiveness of celebrity credibility in endorsement advertising. It will shed more light on the effects of celebrity credibility through the impact of different credibility dimensions on Chinese consumers’ intention to purchase the endorsed product.

At the same time, the findings of this study will help establish the difference between the cognitive and behavioral effects of celebrity endorsement. In line with the Ohanian studies (1990, 1991), a distinction will be made between consumers’ intention to ‘consider purchase’ and ‘actually purchase’ so as to differentiate between the cognitive
and behavioral responses of consumers to celebrity endorsement. Since celebrities are believed to increase sales of a product through endorsement (McCracken, 1989), this study will provide valuable new insight into the effects of the different credibility dimensions on this important measure of advertising effectiveness in Asia and China in particular.

1.3.2 Methodological contributions
This study will contribute to celebrity endorsement research methodology through its assessment and development of a reliable scale to measure the essential qualities of celebrity credibility. It will help ascertain the generalizability of Ohanian’s (1990) celebrity credibility scale, which is widely used in the U.S., across cultures. It will also develop a more accurate measurement of celebrity credibility by combining the key attributes of both the Source Credibility and Source Attractiveness Models into one scale.

1.3.3 Practical contributions
This research will benefit industry practice through the development of a reliable celebrity selection tool. Celebrity selection has always been an important but difficult task for marketing and advertising practitioners (Miciak and Shanklin, 1994). Due to the large sums of money invested in celebrity advertising, it is necessary to determine a formula which can help maximize the effectiveness of the celebrity endorser (Erdogan, 1999). The expanded celebrity credibility scale resulting from this study should help provide an even more comprehensive measurement of celebrity credibility than Ohanina’s (1990) scale. It will facilitate the selection of the ‘right’ celebrity to help
maximize the potential benefits and reduce the potential risks associated with the celebrity endorser.

The findings of the study will provide industry professionals with valuable insight into potential differences between the use of a male versus a female celebrity. In most cases, the decision on whether to use a male or female celebrity in advertising is rather arbitrary and depends very much on the type of product to be advertised. Understanding how consumers perceive male credibility and female credibility can help advertisers to make more informed decisions on whether to use a male or a female celebrity to promote their products. Knowing the impact of the different dimensions of male and female credibility on consumers’ purchase intention will enable advertisers to develop more effective advertising campaigns and maximize the use of celebrities in achieving their advertising objectives.

The study will also contribute to the planning and execution of a successful integrated marketing strategy. By demonstrating the cognitive vs. behavioral effects of the different dimensions of celebrity credibility, it can help marketing managers to integrate celebrity advertising into their overall marketing strategy more effectively. Consumers are at different stages of the ‘buy’ cycle and marketers must know how to target consumers with their various marketing activities (Schaefer, Parker and Haytko, 2011). A better understanding of the effects of different endorser qualities will enable marketers to maximize the use of celebrity advertising in developing fully-integrated marketing campaigns to take consumers through to the final purchase stage.
1.4 Methodology

As an extension of Ohanian’s (1990, 1991) research, this will be a cross-sectional, quantitative study using exploratory and confirmatory factor analytic techniques to validate the dimensions of source credibility and regression analyses to measure their impact on purchase intent. An anonymous questionnaire survey with a convenience sample of 300 Hong Kong Chinese-speaking residents aged 18 and above will be conducted on the street. To help reduce response bias, every third passer-by will be intercepted on the street and invited to complete a short Chinese-language questionnaire by themselves in the presence of the researcher. Full details and justification of the methodology are provided in Chapter 3.

1.5 Outline of the Dissertation

This dissertation is divided into five chapters:

*Chapter 1: Introduction* offers an overview of the issues arising from the growing importance of celebrity endorsement around the world, the research problem and objectives, a summary of the methodology, and an outline of the contributions of the project.

*Chapter 2: Literature Review* traces the development of celebrity endorsement research and the key issues relating to celebrity advertising. It begins by introducing the major theories of communication and their influences, followed by a discussion of the literature on celebrity credibility and endorser effectiveness. The review points to a research gap and proposes five hypotheses for testing.
Chapter 3: Methodology describes and justifies the methodology used in this research. It highlights the advantages of a street-intercept survey and explains the sampling method. It also elaborates on the various stages of questionnaire development and survey administration. The choice of data analysis procedures is then justified, ending with a reassurance of high ethical standards throughout the process.

Chapter 4: Data Analysis presents the procedures of data analyses, results and the meaning of the findings with reference to the hypotheses. It describes the exploratory factor analysis used to verify the structure of the celebrity credibility scale, followed by an assessment of the model fit through confirmatory factor analysis. It also explains the testing of the hypotheses regarding purchase intentions through multiple regression analyses and reports on the findings.

Chapter 5: Discussion and Conclusion summarizes the findings of this research project and discusses the implications and contributions from theoretical, methodological and practical perspectives. Finally, the limitations are discussed together with recommendations for future research. The chapter ends with a conclusion to the whole dissertation.

1.6 Conclusion to Chapter One
This chapter has laid the foundation and provided a framework for the dissertation. It has introduced the research problem and issues, and provided a justification for the research. The methodology was presented, followed by an outline of the dissertation. A review of the literature comes next.
CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter provides the background and context for the research issues and develops the theoretical framework for this study. Its objective is to review the major literature which constitutes celebrity endorsement research with a view to identifying a research gap. Beginning with the early communication theories which form the basis of the research, the review highlights source credibility as the key to endorser and advertising effectiveness. It also emphasizes the need for a more effective measurement of celebrity credibility to aid celebrity endorser selection. Based on the review, the objective of this study is to identify the essential characteristics of a credible endorser and their effects on consumers' purchase intention in Hong Kong. A five-dimensional celebrity credibility scale, extended from the results of a widely-accepted study conducted in the U.S., is proposed for further testing in the Hong Kong Chinese market.

This chapter is divided into 12 Sections. Section 2.2 outlines the key concepts in celebrity endorsement research, followed by an introduction to the major influences (Section 2.3) and theoretical frameworks (Section 2.4) of the research. Section 2.5 presents some of the earlier studies on the effectiveness of the celebrity endorser, which provide the platform for celebrity endorsement research. More recent research on the effect of celebrity credibility as measured mostly by its impact on purchase intention is discussed in Section 2.6. Section 2.7 traces the development of the concept of the multi-dimensionality of celebrity credibility, highlighting the major trends of research which have contributed to defining celebrity credibility. To complement the review on
consumer studies, Section 2.8 discusses the major studies on celebrity selection from practitioners’ perspectives. Section 2.9 presents the tri-component celebrity credibility scale developed by Ohanian (1990) to help maximize endorser effectiveness and the studies related to the application of her scale both in and outside the U.S. Section 2.10 introduces two major cultural theories most applied in cross-cultural research and presents some of the studies which confirm these theories, including studies in celebrity endorsement research conducted in Asia. Section 2.11 outlines the growth of celebrity endorsement and the need for more research in China. The research for this study is described in Section 2.12 together with a summary of the hypotheses to be tested. The chapter ends with concluding comments in Section 2.13.

2.2 Key Concepts in Celebrity Endorsement Research

With the large amount of promotional spending invested into celebrity endorsement by businesses around the world, celebrity endorsement has become a major topic of research among academics and practitioners. It is generally believed that celebrities can help cut through the clutter and draw attention to advertising messages (Erdogan, 1999; Erdogan, Baker and Tagg, 2001; Kaikati, 1987). Since the objective of using celebrities is to increase the effectiveness of the advertising or promotion, it is not surprising that most research has focused on the potential benefits and dangers, i.e. the advantages and disadvantages, of celebrity endorsement. Lear, Runyan and Whitaker (2009) posit that economic return, avoidance and selection of celebrity are among the most salient constructs of celebrity endorsement research. These areas are discussed in turn.
2.2.1 Financial implications of celebrity endorsement

The financial benefits of celebrity endorsement have been well documented in research. Nike, for example, increased its share of the golf ball market significantly when Tiger Woods started promoting its golf apparel in 1996. Horne (2006) estimated that, even well past his heyday, the basketball superstar Michael Jordan’s influence on products such as drinks, tickets and sports shoes was about US$13 billion in 2003. In China, it is believed that the sales of Coca Cola have increased by 24% after it employed the new generation of Chinese idols to endorse the product (Song, Chaipoopiratana and Combs, 2008).

The use of celebrity endorsement is fairly well justified by the potential economic return which successful celebrity endorsement can bring. The results of Mathur, Mathur and Rangan (1997) using event study methodology showed that the anticipated return of Michael Jordan to the NBA led to an average two percent increase in the market-adjusted values of his client firms. This echoed the findings of a similar study by Agrawal and Kamakura (1995) on the profitability of celebrity endorsement. Their study showed that the announcement of 110 celebrity endorsement contracts had a positive impact on the firms’ expected return and concluded that celebrity endorsement can be generally viewed as a worthwhile investment. A recent study (Ding, Molchanov and Stork, 2011) using the same methodology has revealed similar results, with technology products showing particularly high positive returns.

2.2.2 Avoidance and potential risks

While celebrity endorsement has its obvious benefits, there are undeniable risks involved in associating a particular product or brand with a celebrity. Sometimes
celebrities may overshadow the brand, with consumers focusing their attention on the
celebrity without noticing the endorsed brand (Erdogan, Baker and Tagg, 2001). When
a celebrity endorses too many products, there is the potential danger of over-exposure,
which has been found to reduce the effectiveness of the message (Tripp, Jensen and
Carlson, 1994). Celebrities may also be perceived as endorsing the products only for
money, referred to as the ‘hired gun’ problem by Solomon, Bamossy and Askegaard
(2002). Some consumers see celebrities as ‘puppets’ of companies who lie about the
products in their endorsement (Temperley and Tangen, 2006).

One of the most researched ‘risks’ of celebrity endorsement is no doubt the effect of
negative information. Celebrities’ potentially bad behavior, which is beyond the
control of advertisers, may be offensive to customers (Miciak and Shanklin, 1994).
‘Tarnished celebrities’ may become liabilities to their endorsed brands, as in the case of
Madonna and Michael Jackson for Pepsi Cola (Till and Shimp, 1998). Reporting on
the results of three studies using an associative network model of memory as a
theoretical framework, Till and Shimp (1998) warned that negative news about a
celebrity would reduce the appeal of the endorsed brand. An experiment conducted by
White, Goddard and Wilbur (2009) confirmed that negative information about a
celebrity endorser led to a negative transference of affect in the endorsement
relationship. However, a study by Money, Shimp and Sakano (2006) comparing the
effect of negative celebrity endorser information in the United States and Japan showed
that not all negative information had a harmful impact.
2.2.3 Celebrity selection and endorser effectiveness

All the above underlines the importance of the endorser, who can have a ‘favorable or deleterious impact on an entire company and its brands’ (Miciak and Shanklin, 1994, p.51). The positive effects of celebrity endorsers are well established and accepted by advertisers (Choi and Rifon, 2007). Celebrity endorsers can help to cut through the media clutter and achieve high recall rates for marketing messages (Erdogan, 1999; Friedman and Friedman, 1979). The use of a celebrity is considered one of the best ways to communicate a specific message to a target audience within a limited amount of space and time (Dyer, 1988). He/she can help the products to stand out and position them properly in the mind of the consumer (Temperly and Tangen, 2006).

In order to maximize the positive and minimize the potentially negative impact of celebrities, endorser selection has become a major topic of interest for both academics and practitioners (Erdogan, Baker and Tagg, 2001). The selection of an appropriate celebrity is an important and difficult undertaking (Erdogan, 1999; Miciak and Shanklin, 1994; Ohanian, 1990). Celebrity endorsement is a complex process which involves the interaction of source, product, message and situational factors (Mittelstaedt, Riesz and Burns, 2000). Since endorsers play the role of a message sender in advertising, many academics have turned to communication theories in developing a system or model to aid the selection of appropriate celebrities (Charbonneau and Garland, 2005).

This section has introduced the key concepts in celebrity research, which focuses very much on the potential risks and benefits of celebrity endorsement. Research on celebrity endorsement has mostly revolved around three major topics: financial return, avoidance and celebrity selection. While the positive financial effect of celebrity
endorsement is well documented, there are also potential risks such as over-exposure or negative celebrity endorser information. To maximize the positive effect of celebrity endorsement, researchers have applied communication theories in developing a tool to facilitate the selection of the ‘right’ celebrity. The following section highlights the major schools of thought which form the background of celebrity endorsement research.

2.3 Major Influences on Celebrity Endorsement Research

2.3.1 Source credibility & early communication theories

In their effort to determine ‘formulas’ that can help maximize celebrity endorsement effectiveness, many researchers have devoted their studies to the process of celebrity advertising and the characteristics of the endorser. This stream of research has its roots in the study of communication, notably the seminal study by Hovland and Weiss (1951). Part of a coordinated research project on factors affecting changes in attitude and opinion, it is based on the findings of one of a series of experiments on the effects of communication sources on communication. The effects of credibility of source were studied by presenting respondents with identical content attributed to different sources considered by the respondents to be of ‘high trustworthiness’ or of ‘low trustworthiness’. The study shows that the same communication is considered by almost twice the number of respondents as ‘justifiable’ when presented by a ‘high credibility’ source than by a ‘low credibility’ source.

The article by Hovland and Weiss (1951) confirmed the important role which a credible source plays in the effectiveness of a communication. By establishing ‘trustworthiness’ and ‘expertness’ as the two key factors of source credibility, it also contributed to the definition of ‘credibility’ and its change from a purely uni-dimensional concept of high
vs. low credibility. Together with a later study by Hovland, Janis and Kelley (1953), it formed the basis of subsequent research into communication sources, particularly how a credible source such as a celebrity influences the audience’s beliefs, opinions and behavior (eg. Baker and Churchill, 1977; Kamins, 1990; Patzer, 1983).

2.3.2 Kelman’s process of attitude change

The research by Hovland and his associates on the influence of message source on attitude change was further expounded in social psychological research. In his investigation of the relationship between attitude change and persuasion, Kelman (1961) classified three processes of attitude change – internalization, identification and compliance – based on the source attributes of credibility, attractiveness and power. When the message is in line with the receiver’s value system, internalization occurs and the receiver accepts the source’s influence. According to Kelman (1961), attitude change can also be influenced by source attractiveness through identification. This happens when the receiver conforms to the behavior advocated by the source in order to derive satisfaction from becoming like the source. Kelman’s theory of identification and internalization helps to explain the communication process and how a message is perceived and what it means to the recipient. It became an important component of subsequent research on source credibility and on celebrity endorser effectiveness including recent research on the effects of celebrity athletes (eg. Brand, Hoeke and Moe, 1989; Braunstein and Zhang, 2005; Dix, Phau and Pougnet, 2010; Friedman and Friedman, 1979; Kamins, 1990).
2.3.3 Consumer symbolism

Another major school of thought in the study of communication which significantly influenced the development of celebrity endorsement research is ‘consumer symbolism’. Levy’s (1959) article on the symbolism of consumer goods was no doubt one of the first to champion the premise that the consumption of modern goods is determined more by their social meaning than their functional utility. A well-structured theoretical discourse on the changing American consumer society and its shift from functionality to symbolic values resulting from increasing affluence, it offered a convincing argument through a wide range of examples, from clothing and mink to theatrical work and musicals. His authoritative call for more research in this area and attention to the choice of appropriate symbols for advertising a product was heeded by researchers and marketing practitioners alike. It spawned a large amount of work such as the study by Hirschman (1980) which shared the basic assumption that consumers’ product evaluation and adoption is very much determined by the product’s symbolic qualities.

This section has introduced the major communication theories which form the backbone of the theoretical models in celebrity endorsement research. Research on endorser effectiveness has its roots in Hovland and Weiss’ (1951) source credibility theory on the role of the communicator and the message source’s ‘trustworthiness’ and ‘expertness’. Studies on the process of celebrity advertising have also been subject to the influences of Kelman’s (1961) processes of attitude change and Levy’s (1959) treatise on consumer symbolism. The next section describes the major models which have been derived from these theories.
2.4  Major Theoretical Frameworks of Celebrity Endorsement Research

2.4.1  The source models

(i)  Source Credibility

Since the use of celebrity endorsement stemmed primarily from the belief that the persuasiveness of a message is significantly influenced by the characteristics of the communicator, Hovland et al.’s (1953) source credibility model has often been applied to celebrity endorsement research. According to his source credibility model, the effectiveness of a message is a function of the endorser’s perceived level of expertise and trustworthiness. ‘Expertise’ is defined as ‘the extent to which a communicator is perceived to be a source of valid assertions’ (Erdogan, 1999, p.298) and ‘trustworthiness’ refers to the audience’s confidence in the source’s ability and intention to make valid assertions (Hovland et al., 1953).

The persuasive effect of source credibility has been widely researched in the study of communication. Hovland et al.’s (1953) research has been supported by many studies. The results of Johnson, Torcivia and Poprick’s (1972) study on high and low credibility sources have confirmed the effect of source credibility on the subject’s acceptance of the message. Dholakia and Sternthal (1977) agreed in a similar study but cautioned that the interaction of source credibility and other situational or contextual factors could reduce its persuasive effect. Following on the research of Dholakia and Sternthal (1977), Harmon and Coney (1982) confirmed the persuasive impact of source credibility in buy and lease situations. Their study showed that a highly credible source was more effective with a buy recommendation, a position which was viewed unfavorably by the message recipient, but a moderately credible source was more effective when the more favorable position of a leasing recommendation was adopted.
Other researchers have tried to uncover the structure of source credibility. In addition to ‘expertise’ and ‘trustworthiness’, other attributes of a persuasive source which are believed to induce attitude change are ‘attractiveness’, ‘similarity’ and ‘likableness’ (Mills, 1969). A series of research studies in speech communication using factor analytic techniques have confirmed the major dimensions of source credibility to be ‘trustworthiness’ (Applbaum and Anatol, 1972; Bowers and Philips, 1967; Whitehead, 1968), expertness/competence (Applbaum and Anatol, 1972; Bowers and Philips, 1967; Whitehead, 1968) and dynamism (Applbaum and Anatol, 1972; Berlo, Lemert and Mertz, 1969; Whitehead, 1968). ‘Trustworthiness’ is generally considered as the major dimension underlying source credibility without which attitude change cannot be effected (Sereno and Hawkins, 1967). Together with ‘attractiveness’, the two have become probably the most widely-researched attributes in celebrity endorsement literature.

(ii) Source Attractiveness

The positive effects of physical attractiveness on opinion change have long been the subject of considerable interest among social science researchers. The source attractiveness model is derived from McGuire’s (1985) ‘source valence’ model, which suggests that the attractiveness of the source (both physical and non-physical) affects the effectiveness of the message. Based on the results of a considerable amount of social research which point to the fact that a person’s initial perception of another person is very much affected by the person’s physical attractiveness, Baker and Churchill (1977) attempted to extend the limited research on the impact of models in ads on the target audience. Since physical attractiveness per se had until then been given little attention by advertising researchers, their study was unique in its focus on
the study of effects attributable to physical attractiveness in advertisements. By comparing the effects of two dummy advertisements for coffee and perfume/cologne/aftershave featuring two male and two female models previously judged to be most attractive and unattractive, the study confirmed the positive impact of physically attractive models on the subjects’ evaluation of the ads. In a similar study, Chaiken (1979) demonstrated in a field setting through the use of live male and female models that attractive (vs. unattractive) communicators are far more persuasive and effective in changing beliefs.

It is important to note that source attractiveness is not limited to physical attractiveness but is closely linked to other non-physical attributes. Major non-physical components of source attractiveness include likability and similarity. McGuire (1985) posits that the effectiveness of a message is dependent on ‘similarity’, ‘familiarity’ and ‘liking’ for an endorser. ‘Similarity’ refers to the extent that the source is perceived to resemble the receiver and ‘familiarity’ is considered as the knowledge of the source acquired by the receiver through exposure. An extension of physical attractiveness, ‘likability’ is the positive feeling which the source’s physical appearance and behavior creates in the receiver. Based on Joseph’s (1982) review of seven opinion change and four advertising experiments conducted by other researchers, the most consistent finding in source effects research is that physically attractive communicators are liked more than unattractive ones. Joseph’s (1977) own research also shows that message recipients consider attractive sources to be more ‘dynamic’ and more similar to them.
2.4.2 The match-up hypothesis

The match-up hypothesis goes beyond the source models to emphasize the relationship between the source and the product. The source models have often been criticized for their single-minded focus on the message source without regard for other important factors such as audience and product (McCracken, 1986). Since advertising with attractive and credible models has not worked for all products, it is obvious that there are other influencing factors which need to be considered. Forkan’s (1980) suggestion of product match-up as key to promotional effectiveness has been followed by a stream of research on endorser-product/brand congruence. The match-up hypothesis purports that the image of the spokesperson and that of the product should converge in order for an advertisement to be effective.

The origin of the match-up hypothesis can be traced to the study of model type and advertising effectiveness, particularly to the seminal study by Kanungo and Pang (1973). The study investigated the relationship between the gender of the model and the type of product advertised. Their results showed that a masculine product (a car) with a male model received a most favorable evaluation by the subjects and the same for a feminine product (a sofa) with a feminine model. The findings led to the authors’ conclusion that a positive evaluation of the advertised product depends on the ‘fittingness’ of the model and the product.

2.4.3 The meaning transfer model

Although consumer symbolism was not new to social science research, it was McCracken (1986) who was the first to conceptualize ‘the mobile quality of cultural meaning in a consumer society’ (McCracken, 1986, p.71). According to McCracken
(1986), cultural meaning is transferred from the culturally constituted world to the consumer good and then onto the individual consumer. Echoing Hirschman’s (1980) theory that symbolic meanings are created and introduced to consumers through the production process, McCracken (1986) posits that advertising is one of the ways in which meanings move from culture to consumers and to goods. His argument is widely supported by advertising researchers such as Domzal and Kernan (1992), who believe that the function of advertising is to communicate the cultural meanings of products to consumers.

McCracken’s (1986) treatise provides the theoretical underpinning for the meaning transfer model and its application in celebrity endorsement research. Despite the absence of empirical support, McCracken (1986) was able to make a clear, convincing argument with extensive references to prior research and practical examples from the American consumer society. The discourse set the scene for his authoritative article on celebrity endorsement (McCracken, 1989) published three years later, in which he applied the meaning transfer model to the celebrity endorsement process.

This section has reviewed the earlier celebrity endorsement literature which has provided the key concepts and theoretical platform for celebrity endorsement research. The literature shows that the three major models in celebrity endorsement research seem to share the same basic construct. One could justifiably argue that the source attractiveness theory, the match-up hypothesis and the meaning transfer model are but an evolution of the source credibility model. The concepts of physical attractiveness and expertise as well as endorser symbolic properties are already embedded in Hovland and Weiss’ (1951) source credibility theory of communication. All point to the
important role of the celebrity in the endorsement process and the fact that effective celebrity endorsement hinges on the characteristics of the endorser, notably, his or her credibility.

Over the last few decades, the need to ascertain and improve the effectiveness of celebrity endorsement has resulted in a large amount of research. A great deal of the research effort has been directed at ascertaining the impact of using celebrity versus non-celebrity and the effectiveness of the endorser. The next section traces the development of the major research undertaken in this area.

2.5 Research on Celebrity Endorser Effectiveness

It is generally believed that the use of celebrities in advertising can help influence brand choice and drive sales (Lear, Runyan and Whitaker, 2009). Celebrity endorsers are seen to live in a world of ‘sell product or else’ (Miciak and Shanklin, 1994, p.52).

Since the primary objective of celebrity advertising is to increase sales, the effectiveness of celebrity endorsement has often been measured through its impact on consumers’ purchase intention. ‘Purchase intention’, together with ‘attitudes towards the ad’ and ‘attitudes towards the brand’ are the three principal outcome variables in studies of advertising effectiveness. The ‘purchase intention’ variable finds ‘routine application’ in consumer research (Kalwani and Silk, 1982, p.243) and forms the basis of the research on celebrity endorser effectiveness.

Some of the earliest research on how different types of endorsement affect attitude toward the product and purchase intention was conducted by Friedman and his associates. Friedman and Friedman (1979) hypothesized and confirmed that the use of
a celebrity would result in higher believability and significantly greater purchase intentions. However, differing results were reported in two of their earlier studies on endorser type. The first study employed four different types of endorsers, including one celebrity, Al Pacino (Friedman, Termini and Washington, 1976). Undergraduate students (150) were shown one of four advertisements for a fictitious brand of wine. The results showed that the ads with Al Pacino and with the company president created higher purchase intentions than the other two using a student and a wine critic. In another similar study by Fireworker and Friedman (1977) undertaken at a shopping centre using three types of endorsers (celebrity, expert and typical consumer), there was no difference in purchase intention for the celebrity and non-celebrity ads, even though the celebrity endorser generated more positive attitudes towards the advertisement than others. Hence although celebrities were shown to have a positive impact by Friedman and his associates, their exact effects remained inconclusive.

The advantage of a celebrity over a non-celebrity found further substantiation in an authoritative study by Atkin and Block (1983) which compared the differences in the responses generated by celebrity and non-celebrity endorsement to advertising, product image and purchase intention. Advertisements featuring celebrities generated more favorable responses under all conditions and among all age groups than those not using celebrities. Those who were exposed to the celebrity-endorsed advertisement were shown to have a greater intention to purchase, although the difference was not statistically significant.

The positive impact of the celebrity endorser on purchase intention was reaffirmed in a study by Mowen and Brown (1981), which examined the use of a single celebrity
endorser (Paul Newman) versus multiple endorsers (Paul Newman, Steve McQueen and George C. Scott). Participants were shown the storyboards of a TV commercial for a pen and asked questions on their perceptions of the product and purchase intention. Those exposed to a celebrity endorser were shown to have the highest purchase intention and the most favorable attitudes towards the advertisement. Reactions were even more favorable when participants were told that the celebrity had never endorsed another product before. Apart from reinforcing the positive impact of celebrity endorsement, the results also pointed to the influence of other factors on endorser effectiveness such as celebrity-product match-up and the potential problem of over-endorsement.

Despite other potential influences, the appeal of the celebrity was shown to be an overriding factor in influencing purchase intention in a study by Kamins (1989), which compared the effects of one-sided (only positive claims) versus two-sided (both positive and negative claims) celebrity advertising. Computer advertisements featuring a celebrity (Leonard Nimoy) and a non-celebrity accountant were presented to participants in both a one-sided and two-sided context. The study confirmed that advertisements with celebrity would result in more positive attitudes toward the ad and higher purchase intention than advertisements without celebrity, irrespective of whether they were one-sided or two-sided. The two-sided appeal was also found to positively influence purchase intention, an effect which Kamins (1989) believed was due to the inclusion of the celebrity.

Positive feelings generated by endorsers do not always translate into action. Unlike most of the prior research on source physical attractiveness which used a student sample,
Cabellero, Lumpkin and Madden (1989) conducted their study in a naturalistic setting using store patrons and two types of grocery products - a new soft drink (a low involvement product which, as a frequently purchased product, requires little information search) and a group of three different deli cheeses (a comparatively higher involvement and higher risk specialty product due to consumers’ lack of familiarity with this group of cheeses, hence need for more information). Participants were presented with the message and endorsers of three different levels of attractiveness in a videotape format (as opposed to print) to extract a behavioral intentions response rather than merely a cognitive response. This rather sophisticated test showed that respondents’ positive attitudes towards the advertisements and products did not necessarily lead to purchase intentions. Cabellero et al.’s (1989) study lends support to the much debated theory that the effect of endorser physical attractiveness is more cognitive than behavioral.

An authoritative study by Mehta (1994) using advertising response modeling (ARM) echoed Cabellero et al’s (1989) finding, highlighting at the same time the cognitive effect of the source celebrity. Two commercials promoting a line of clothing were used in the study. The commercials were identical except for the model source - one with a celebrity identifiable by name, the other an unknown professional model. Half of the participants in this experimental study saw the celebrity commercial while the other half saw the non-celebrity commercial. Measures of persuasion included attitudes and buying intention. There was no difference in purchase intention between the celebrity and the non-celebrity groups. However, the experiment demonstrated a strong influence of source-related thoughts on commercial attitude and, in turn, brand attitude in the celebrity condition. It led to the author’s suggestion that celebrities who
could generate positive thoughts should be used due to their important role in influencing persuasion.

This section has summarized some of the earlier research on the effect of celebrity endorsement particularly in terms of purchase intention. Most of these studies have demonstrated the advantage of using a celebrity over a non-celebrity in influencing purchase intention. However, some of the findings showed that the effect may be more cognitive than behavioral. With the increasing use of celebrity advertising in the last two decades, many researchers have sought to gain further insight into celebrity endorsement through the effective characteristics of the endorser, particularly celebrity credibility and its effect on advertising effectiveness.

2.6 The Effects of Celebrity Credibility in Endorsement Effectiveness

Generally believed to be a key component of endorser effectiveness, celebrity credibility has long been a major topic of interest in celebrity endorsement literature. Celebrity credibility is defined as ‘the extent to which the source (in this case, the celebrity) is perceived as possessing expertise relevant to the communication topic and can be trusted to give an objective opinion on the subject’ (Goldsmith, Lafferty and Newell, 2000, p.43). As credible message sources, celebrities are believed to add credibility to the advertisement (Yoon, Kim and Kim, 1998). The fact that celebrities bring credibility to advertising messages is a ‘widely accepted explanation’ for celebrity endorser effects. Celebrities are seen to be more credible and have a stronger influence on consumers’ brand attitudes and purchase intention than non-celebrities (Choi and Rifon, 2007, p.305). With the role of celebrity credibility in the endorsement process firmly established in early research, the emphasis in recent
literature has shifted to the effect of its interaction with other factors in the endorsement process. This section discusses some of the key findings and major debates in this area which are relevant to this study.

In a follow-up to Kamins’ (1989) study on the impact of one-sided versus two-sided celebrity advertising reviewed in the previous section, Kamins, Brand, Hoeke and Moe (1989) investigated the effect of a two-sided appeal on the celebrity’s credibility. Two-sided advertising, which until then had only been done in a non-celebrity context, was always found to be more effective than one-sided communication in increasing advertising credibility, but not influencing purchase intention (Kamins et al., 1989). In this first test of sidedness in a celebrity context, Leonard Nimoy was selected as the celebrity in a pretest which rated twelve male celebrities on a number of personal characteristics including credibility, trustworthiness and believability. A one-sided version and a two-sided version of the same advertisement showing both the positive and negative aspects of the product were each presented to heads of fifty-two small to medium-sized businesses in a broad range of industries. Consistent with the findings of previous studies on sidedness, two-sided advertising was found to be more effective in influencing advertising credibility, brand attitudes and, for the first time, purchase intention, which the authors believed was due to the inclusion of the celebrity.

The effect of multiple product versus single product endorsers was the subject of another study on spokesperson credibility by Tripp, Jensen and Carlson (1994). In this experimental design, two celebrities who received the highest and lowest ratings of credibility from the student sample were used in test advertisements for four different types of products, Visa, Kodak film, Colgate toothpaste and Certs breath mints. The
undergraduate students were tested using questions regarding the credibility, trustworthiness and likability of the endorser as well as their attitudes towards the brand and purchase intention. The results showed that participants liked the celebrity more when they endorsed only one product and less when they endorsed multiple products. A similar reaction was found with regard to attitude towards the ad, the brand and purchase intention.

The combined effect of endorser and corporate credibility on consumers’ attitudes and purchase intention was of particular interest to Lafferty and Goldsmith (1999) in their study on the effectiveness of endorser credibility. Using a 2 x 2 between subjects factorial design, one hundred undergraduate students were shown one of four advertisements for a fictitious brand of athletic shoes which had a high credibility (a former Olympic gold medalist) or low credibility endorser (Roseanne Barr) and a company presented in a positive or negative light. Although both credibility types were found to influence attitudes toward the ad and the brand, only the credibility of the company seemed to have a significant impact on purchase intention. While the study confirmed once again the important role which a credible celebrity endorser plays in advertising effectiveness, it also showed that a credible endorser could only go as far as enhancing the perception of the ad, but not inducing purchase.

The close relationship between celebrity and credibility, and its positive effect on ad perception was reaffirmed by Nataraajan and Chawla (1997). The focus of their study was to ascertain whether celebrity endorsed advertisements would be perceived as more credible and enhance the perceptions of the advertisements. Four different advertisements for L.A. Gear tennis shoes using four different types of spokespersons -
male celebrity, female celebrity, male non-celebrity and female non-celebrity - were shown to 164 students assigned to four treatment groups. The findings attested to 'the overall superiority of celebrity endorsed ads insofar as source credibility is concerned' (Nataraajan and Chawla, 1997, p.126). Advertisements with celebrities were rated more positively on all counts than advertisements with non-celebrities. It was worth noting that participants responded differently to male and female endorsers. Advertisements with a female endorser were rated as more attractive than ads with a male endorser, while ads with a male endorser were rated as more informative than those with a female endorser. The research led to the authors’ recommendation that further investigation into the role of the endorser’s gender be conducted (Nataraajan and Chawla, 1997). By revealing the close relationship between a female celebrity and her attractiveness as well as between a male celebrity and the information of the ad, the findings highlight not only differences in the effects of gender, but also the way in which certain qualities in the image of the celebrity endorser are transferred to the product as posited by the meaning transfer model.

In view of the important role which celebrity credibility plays in advertising effectiveness, it is not surprising that much of the focus of endorser effectiveness research has been on trying to determine what constitutes a credible celebrity endorser. According to McCracken (1989), the positive effect of celebrity endorsement lies in the transfer of the celebrity’s positive image to the product. The source effect theories as well as the match-up hypothesis and the meaning transfer model have all suggested that celebrity endorsers possess a multi-dimensional nature. The next section summarizes some of the major research efforts directed at identifying the key dimensions of celebrity credibility.
2.7 The Multi-dimensionality of Celebrity Source Credibility

In defining the qualities of an effective celebrity endorser, many have based their research on the source effect theory, particularly Hovland and Weiss’ (1951) source credibility model (eg. Amos and Strutton, 2008; Friedman, Santeramo and Traina, 1978; Ohanian, 1990). Celebrities are believed to possess certain characteristics which appeal to the target audience or message recipients. It is these characteristics which have a persuasive effect on the message. This section highlights the key dimensions of celebrity credibility through a review of some of the major literature on the source effect theories as well as the product match-up and meaning transfer models.

2.7.1 Application of Hovland’s source credibility model

Friedman, Santeramo and Traina (1978) were among the first to apply Hovland and Weiss’ (1951) theory of source credibility to celebrity endorsement research. Based on the research by Hovland and his associates (1951, 1953), which showed ‘trust’ to be an underlying factor of ‘credibility’, Friedman et al.’s (1978) study tried to ascertain those attributes of a celebrity which are most highly correlated with ‘trust’. Two studies were conducted, one with a student sample and one with a civic group sample. Respondents were asked to rate a number of celebrities based on ‘awareness’, ‘trust’, ‘likeableness’, ‘similarity’, ‘lifestyle’ and ‘personal attractiveness’ in Study One and the same attributes plus ‘talent/expertise’ in Study Two.

The results reinforced Hovland and Weiss’ (1953) theory of ‘trustworthiness’ and ‘expertise/talent’ as key components of celebrity credibility. ‘Trust’ was found to correlate most strongly with ‘likeableness’ and ‘similarity’ in Study 1 and with ‘likeableness’ in Study 2. The study also revealed the importance of ‘awareness’,
found to have a strong correlation with ‘trust’ in Study 2. ‘Likability’ was confirmed to be the most important attribute of ‘trust’, leading to the authors’ recommendation that advertisers should choose a well-liked celebrity. Above all, the study lent support to the multi-dimensionality of celebrity credibility by expanding the definition of ‘trustworthiness’ through its strong correlation with attributes such as ‘likeableness’, ‘similarity’ and ‘awareness’.

2.7.2 Physical attractiveness as a key dimension of source credibility

The influence of Hovland and Weiss (1951) was prevalent in the vast array of ‘physical attractiveness research’ which began in the early 70’s. In a pioneering study on the effects of physical attractiveness on advertising evaluations, Baker and Churchill (1977) rated the impact of attractive and unattractive models using a seven-point semantic differential scale for items such as ‘appealing’, ‘impressive’, ‘attractive’, ‘eye-catching’, ‘believable’ and ‘informative”. Their study using experimental design with dummy ads confirmed that physically attractive models produce higher ad ratings than unattractive models. Based on the cognitive, affective and behavioral intention scores, the authors concluded that the use of a model in an ad should increase message credibility. It was suggested that effect could be even greater in an endorsement ad as the evaluation of the message may be associated more closely with the model’s credibility (Baker and Churchill, 1977).

The multi-dimensional nature of credibility and its effects gained further support in the study by Patzer (1983). One of the most influential studies in physical attractiveness research, it investigated the relationship between communicator physical attractiveness and source credibility through its influences on ‘expertise’, ‘trust’ and ‘liking’. Using
stimulus materials in the form of mock-up advertisements with attractive and unattractive ‘stimulus persons’ as communicators, respondents were asked to evaluate the communicators’ ‘expertise’, ‘trustworthiness’ and ‘likability’. The study confirmed that communicators who are physically more attractive are perceived to be more trustworthy and to possess greater expertise than those who are physically less attractive. It also highlighted the significant effect which communicator physical attractiveness has on his/her likability.

Patzer’s (1983) study was one of the first to link physical attractiveness directly with source credibility and its dimensions: ‘trustworthiness’, ‘expertise’ and ‘likability’. In this study, Patzer (1983) tried to balance theory and research through painstaking efforts to minimize bias and maximize internal validity. This was followed by another marketing article by Patzer (1985), which suggests that the increasing use of celebrity endorsers has made physical attractiveness a key dimension of source credibility. Patzer’s two articles (1983, 1985) formed the basis of the source attractiveness model and helped pave the way for its application in subsequent celebrity endorsement research.

Another major study (Kahle and Homer, 1985) measured the effect of celebrity-source physical attractiveness, celebrity-source likability and participant product involvement from a social adaptation perspective. A champion of the social adaptation (SA) theory, Kahle replicated a previous study by Petty, Cacioppo and Schumann’s (1983) on their Elaboration Likelihood (EL) theory in this research-based scholarly article (Kahle and Homer, 1985). In an experiment using a 2x2x2 between subjects factorial design, 200 undergraduates were exposed to a print advertisement for a disposable razor in which
the levels of attractiveness and likability of the celebrity as well as the involvement with the ad varied. Participants were asked to complete a questionnaire about brand recall, attitudes and purchase intentions.

Kahler and Homer’s (1985) insightful study on celebrity-source attractiveness confirmed the importance of physical attractiveness in celebrity advertising particularly through its positive impact on purchase intention. It showed that participants liked the product more when it was associated with an attractive celebrity than with an unattractive celebrity. Brand recall was shown to be higher in both attractive and likable celebrity conditions. An attractive celebrity created more purchase intention, but surprisingly, an unlikable celebrity produced more intention to buy than a likable celebrity. By demonstrating the relationship between the physical attractiveness of the celebrity and a beauty product (razor), the study lent support to the match-up hypothesis emphasizing the communicator and message/product match-up.

2.7.3 Physical attractiveness as a match-up factor

While Kahle and Homer’s (1985) study was limited to only one type of product, a follow-up study by Kamins (1990) involving both attractiveness-related and non-attractiveness related products is considered to be the first comprehensive test of the match-up hypothesis in celebrity selection. In what the author claimed to be a ‘supportive test’ of Kahle and Homer’s study (1985), mock-up ads with Tom Selleck (the physically attractive celebrity) and Telly Savalas (the physically unattractive celebrity) were shown to participants. Scales relating to perceived characteristics of the celebrity including ‘attractiveness’, ‘likability’ and ‘familiarity’ were used to measure advertiser believability and credibility, spokesperson believability and
credibility as well as attitudes towards the ad, brand and purchase intention.

Together with Kahle and Homer’s (1985) study, Kamin’s study (1990) forms the backbone of the celebrity-product match-up model in celebrity endorsement research. It also reinforces the relationship between physical attractiveness and spokesperson credibility. The results support the match-up hypothesis that an attractive celebrity has a more positive impact on advertisement and product evaluations for an attractiveness-related product than an unattractive celebrity. In addition, an attractive celebrity is shown to lead to higher spokesperson credibility than an unattractive one. However, the positive impact does not apply to products which are not attractiveness-related. The celebrity attractiveness by product-type interaction is also absent for two of the seven independent variables measured - brand attitude and purchase intention.

Although the focus of most of the empirical work on the match-up hypothesis has been on physical attractiveness, attempts have been made by some researchers to identify other important match-up factors in the endorsement process. In the belief that expertise may be a more powerful match-up factor than physical attractiveness, Till and Busler (1998) conducted two studies to test the match-up effects of physical attractiveness and expertise. Study One on physical attractiveness using a created sports celebrity and two products - a pen (non attractiveness-related) and men’s cologne (attractiveness-related) confirmed that physical attractiveness had a positive effect on brand attitude and purchase intention but no ‘match-up’ effect. As expected by the authors, Study Two, which used two created endorsers (an actor and an athlete) and two products (candy bars and energy bars) to measure the effect of expertise, showed a
match-up effect based on the expertise of the endorser.

The findings led the authors to conclude that expertise is a more powerful dimension than physical attractiveness and that there may be other factors which may also be effective in matching endorsers with products. Although the effect of physical attractiveness was not obvious in this research, the authors did not rule out the possibility of its usefulness as a match-up factor under other conditions. Image is a factor which the authors believe warrant further research. This is in line with the match-up hypothesis, which believes that advertising effectiveness depends on the matching of the image of the endorser and product. Hence Till and Busler’s (1998) research suggests that if the celebrity matches the product, their believability and attractiveness may have a favorable impact on consumers’ attitudes and purchase intention. Apart from underlining the importance of ‘expertise’, their study also reaffirms the positive impact which celebrity endorsement can have on consumers’ purchase intention.

2.7.4 Cultural meanings of celebrities

Till and Busler’s (1998) findings confirm once again the multi-dimensionality of endorser characteristics and the potential influence of other important factors in the celebrity endorsement process. Their suggestion at the end of the article that the image of the endorser could be a relevant match-up factor echoes McCracken’s (1989) meaning transfer model, which emphasizes the symbolic properties of celebrities in the endorsement process. An extension of his article on the movement of the cultural meaning of consumer goods, McCracken (1989) posits that the cultural meanings residing in a celebrity such as status, class, age, personality and lifestyle are passed on
to the products during the endorsement process. The celebrity endorsement process consists therefore of three stages: the formation of celebrity image, transfer of meaning from celebrity to product, and finally from product to consumers.

Although McCracken (1989) offered no empirical support for his theory, the meaning transfer process was later demonstrated in two studies by Langmeyer and Walker (1991a, 1991b). Using Cher and Scandinavian Health Spas in one study and Madonna and Christie Brinkley with bath towels, VCRs and blue jeans in the other, Langmeyer and Walker (1991a, 1991b) confirmed that celebrities embody different meanings which are passed on to the products and the consumers with endorsements. Using a response elicitation format, the former study showed that Cher possessed symbolic qualities such as ‘sexy’, ‘attractive’ and ‘healthy’ which were passed on to the Scandinavian Health Spa. In the latter study, Madonna and Christie Brinkley were seen to be perceived differently by respondents. The differences in perception affected the meanings of the products, which took on the images of each celebrity.

This section has explored the multi-dimensional nature of the celebrity endorser particularly with regard to celebrity credibility. While research findings have provided ample evidence for the multi-dimensionality of the celebrity endorser, there seems to be no definitive answer to what constitutes an effective endorser or celebrity credibility. Among the key dimensions confirmed in the studies are ‘trustworthiness’, ‘attractiveness’, ‘expertise’, ‘likability’ and ‘awareness’. It appears therefore that these endorser characteristics, together with the cultural meanings inherent in the celebrity, all play a part in the endorsement process to influence the effectiveness of the endorser.
2.8 Selection of the ‘Right’ Celebrity

While confirming the multi-dimensionality of the endorser, the literature reviewed in the previous section has shown that there is no definitive answer to what the essential characteristics of an effective endorser should be. The evaluation and selection of the ‘right’ celebrity as part of a marketing communications strategy is therefore a major concern for both marketing researchers and practitioners. This section discusses the current practice and key research findings regarding celebrity selection from the perspective of practitioners.

In the first major review of the literature and theories pertaining to communicator (particularly celebrity endorser) persuasiveness and effectiveness, Erdogan (1999) endeavored to identify the key factors to consider in the selection of celebrity endorsers. Based on the theories and findings of the literature, the author confirmed that celebrity endorsement can be an effective strategy to help differentiate products in mature and cluttered markets. He concluded that celebrity endorser effectiveness is influenced by a number of factors such as celebrity credibility and attractiveness, product-celebrity match as well as the meanings attached to the celebrities. According to Erdogan (1999), there remains the need to determine a formula which can help maximize the effectiveness of celebrity endorsers especially in the area of celebrity endorser selection, which is key to the success of the strategy.

The most common method currently used by practitioners to evaluate the suitability of an endorser is the Performer Q score. The Q rating of about 1,800 well-known figures is compiled twice a year by an American company called Marketing Evaluations Inc. based on a celebrity’s familiarity and likability. Questionnaires are sent to a panel
which is representative of the U.S. population. Participants are asked to indicate if they have heard of the person and whether they would rate the person as poor, fair, good or one of his/her favourites. To calculate the Q rating, the percentage of the total sample who rates the celebrity as one of their favorites is divided by the percentage of the sample who know the celebrity (Shimp, 2000). In short, the Q rating of a celebrity reflects his/her popularity among those familiar with him/her (Solomon, 1996). This means that Q ratings may sometimes be misleading, as a celebrity who is well liked by a small group of people can receive very high ratings (Knott and James, 2004).

Shortcomings aside, the Performer Q score does provide a standard form of measurement for two key celebrity selection criteria – his/her familiarity and likability. According to Byrne, Whitehead and Breen (2003), familiarity ‘arises through knowledge of the source via repeated exposure’ while likability ‘occurs from affection for the source due to their physical appearance, behavior or other personal characteristics’ (Byrne, Whitehead and Breen, 2003, p.292). Indeed, liking/likability and familiarity are considered as subcomponents of source attractiveness (Buhr, Simpson and Pryor, 1987) and have often been used as key measures of a celebrity’s attractiveness (eg. Choi and Rifon, 2007; Kamins, 1990).

Similar to attractiveness, likability is often considered as an essential characteristic of an effective endorser. Communicator likability has generally been found to enhance attitude change (O’hara, Netemeyer and Burton, 1991). It is the component of the source attractiveness model which is most frequently linked to celebrity endorsers (Friedman and Friedman, 1979). Freiden (1984) posited that celebrities are more effective endorsers than non-celebrities because they are viewed as highly trustworthy,
In a review of literature on the persuasive effect of communicator physical attractiveness, Joseph (1977) concluded that opinion change was greater under the attractive condition and that a person’s liking for a physically attractive source could create a favorable attitude resulting in a positive evaluation of the communicator’s message. Message acceptance is believed to be the result of ‘a tendency to model the attitude and opinion statements of those whom we like’ (Snyder and Rothbart, 1971, p.385).

While there is no doubt that an endorser’s likability plays an important role in the effectiveness of the advertising, its exact impact is not yet clear. A study on the effects of source likability on attitude change showed that likable sources could only enhance attitude change through the mediation of message memorization and repetition (Chebat, Laroche, Baddoura and Filiatrault, 1992). In another study by Fleck, Korchia and Le Roy (2012), likability was confirmed together with trustworthiness to be key mediators for the influence of a celebrity’s perceived personality or image on his or her suitability as an endorser. When testing the impact of four celebrities on purchase intention for four different products, O’Mahony and Meenaghan (1997) found six significant correlations out of a possible total of sixteen. This shows that source likability may not always have a positive effect on purchase intention but it is possible under certain conditions. This effect was further confirmed in Reinhard, Messner and Sporer’s (2006) study which demonstrated the positive effect of a likable salesperson on purchase intention, especially when the salesperson’s desire to influence potential buyers was made explicit.
Often linked directly to source likability as a sub-component of source attractiveness, familiarity has also been shown to have a positive effect in general consumer research and in celebrity endorsement research. The findings of general research on the effects of familiarity comparing the effects of previously encountered/familiar stimuli versus novel stimuli have shown that familiarity has an enhancing effect on a person’s judgement or perception, which means that familiar people can be more persuasive than unfamiliar people (Weisbuch and Mackie, 2009). Similarly, Choi and Rifon (2007) found in the context of celebrities that celebrities’ recognition and popularity make them look attractive to the public and that their achievements and fame make them credible and powerful. In a survey of middle class consumers in 480 households in the U.S., familiar celebrities were able to generate enough interest to hold the attention of male and female consumers for a desired product, though not for an undesired product (Premeaux, 2005). The impact on increasing buying intention was relatively slight (Premeaux, 2005).

The importance of credibility and its key dimensions has found equal support among practitioners. In one of the first studies from the practitioner’s point of view, Miciak and Shanklin (1994) surveyed representatives of 21 ad agencies and 23 client companies on what made them select the celebrities for certain products. The respondents were asked to rank-order a list of criteria according to their importance. Celebrity credibility was identified as the primary reason for selecting a spokesperson. There was also a consensus that trustworthiness and expertise with regard to the endorsed product are the most important dimensions of credibility. Only when a celebrity meets the credibility measure will the experts consider other selection criteria such as celebrity/audience match, celebrity/product match and celebrity attractiveness, which
includes familiarity to the target audience and likability (Miciak and Shanklin, 1994). Hence the study points to the need for an effective measure of celebrity credibility, including other important attributes such as familiarity and likability.

A study on the views of British ad agencies (Erdogan, Baker and Tagg, 2001) aimed at replicating Miciak and Shanklin’s (1994) research in the U.S. confirmed the importance of celebrity selection with similar findings, though slightly different emphases in selection criteria. Representatives of ad agencies who responded to the mail questionnaire survey were asked to rank order a set of criteria. The celebrity characteristics included in the list were trustworthiness, expertise, physical attractiveness, familiarity and likability. Celebrity-target audience match, celebrity-product/brand match and overall image of the celebrity had the highest ratings, followed by celebrity trustworthiness, familiarity and likability. However, celebrity expertise and physical attractiveness only received above-average ratings and were therefore not considered by U.K. experts to be of high importance.

Referencing the studies in the U.S. (Miciak and Shanklin, 1994) and the U.K. (Erdogan, Baker and Tagg, 2001), Charbonneau and Garland (2005) conducted semi-structured depth interviews with nine practitioners from seven Wellington-based ad agencies to identify the main celebrity selection criteria used by New Zealand advertising practitioners. Similar to the two U.S. and U.K. studies, the perceived credibility of the celebrity was considered to be particularly useful to the effective delivery of marketing messages. In line with the U.K. study by Erdogan, Baker and Tagg (2001), Charbonneau and Garland (2005) found no mention of celebrity attractiveness by the New Zealand practitioners. The authors (Charbonneau and Garland, 2005) echoed
Erdogan, Baker and Tagg’s (2001) reasoning that advertising practitioners considered physical attractiveness to be inherent in the celebrity.

To complement the limited amount of prior research on the selection criteria for celebrity endorsers from the practitioner’s perspective, Song, Chaipoopiratana and Combs (2008) conducted a questionnaire survey by mail to practitioner members of the Television Advertisement Salon and ad agency practitioners in China. The study achieved the largest sample of its kind with a total of 384 returned questionnaires. The factor analysis identified seven factors to be the most important for celebrity selection. The three endorser characteristics, ‘physical attractiveness’, ‘credibility’ and ‘amiability/likability’, followed ‘risk’ as the four most important factors. The last three criteria were ‘celebrity-product match’, ‘profession’ and ‘celebrity audience match’. This rare study conducted among Chinese practitioners confirms the importance which practitioners in China, like their counterparts in the West, attach to ‘physical attractiveness’, ‘credibility’ and ‘likability’ and suggests that the same selection criteria used in the West may also be applicable to China.

In summary, this section has described the Performer Q rating based on a celebrity’s familiarity and likability which is commonly used to assess the suitability of a celebrity. In line with the findings of the consumer studies, celebrity credibility is considered by advertising practitioners to be a key selection criterion. At the same time, varying levels of importance attached to the selection criteria in different countries have revealed both similarities and differences in their perceptions of the celebrity endorser. The issue of culture is further exemplified in the next section, which introduces the Ohanian (1990) credibility scale and discusses its application to other cultures.
2.9 Measurement of Celebrity Credibility - the Ohanian Credibility Scale and its Application

To aid celebrity selection, Ohanian (1990) has produced no doubt one of the most authoritative and reliable scales to measure celebrity credibility. Endorser credibility is one of the most popular methods used by advertisers to influence consumers’ attitudes and purchase intention (Lafferty and Goldsmith, 1999). The results of consumer research reported in the literature vary and are often inconsistent regarding the criteria for selecting the ‘right’ celebrity (Charbonneau and Garland, 2005). Since the majority of past research has supported the persuasiveness of a credible source, as noted by Pornpitakpan (2003b), the Ohanian (1990) scale was developed to provide ‘a consistent measurement approach for source credibility’ to help ensure that the positive effect of celebrity credibility can be maximized in the endorsement process (Ohanian, 1990, p.41).

The Ohanian (1990) scale was developed meticulously through two exploratory and two confirmatory studies using both student and civic group samples in the U.S.. Based on Hovland et al.’s (1953) source credibility model, the scale was developed after an extensive literature review of existing scales and communication theories, incorporating also the key concepts of source attractiveness. The resultant tri-component credibility scale comprised 15 semantic differential items, five for each of the three dimensions:

- Attractiveness - attractive, classy, beautiful, elegant, sexy
- Trustworthiness - dependable, honest, reliable, sincere, trustworthy
- Expertise - expert, experienced, knowledgeable, qualified, skilled
After developing a list of celebrities and appropriate products with the exploratory sample, the scale was validated through respondents’ purchase intention and perception of quality for the products tested. To measure purchase intention, respondents were asked about their likelihood to inquire about the product, consider purchasing and actually purchase for personal use and for gift-giving. The results showed that only the perceived expertise of the celebrity had a significant impact on respondents’ purchase intention to purchase the endorsed product. The purchase situation, whether it be for self use or for gift-giving, did not make any difference to the purchase intention (Ohanian, 1991). By confirming the influence of expertise on purchase intention and the ‘nil effect’ of attractiveness and trustworthiness, Ohanian’s (1991) study has suggested ‘expertise’ to be the most important factor to be considered in celebrity selection.

Due to the rigor and extensive validation procedures of the scale (Toncar, Reid and Anderson, 2007; van der Veen and Song, 2010), Ohanian’s source credibility scale has become the standard tool of measurement of credibility for most subsequent research on endorser credibility. Even though some researchers had developed scales to measure different dimensions of source credibility, few assessed the reliability and validity of their scales (Ohanian, 1990). As the first serious attempt at operationalizing source credibility with a reliable and valid scale, Ohanian (1990) succeeded in integrating the most important dimensions of source credibility into one model (van der Veen and Song, 2010). The resultant scale has provided a quality measurement tool for the impact of key components of celebrity endorser effectiveness (van der Veen and Song, 2010).
The Ohanian (1990) scale has been replicated and applied in a wide range of research involving source credibility both in and outside the U.S. Apart from research on endorser effectiveness in the commercial sector, Ohanian’s (1990) celebrity credibility scale also found its application in studies on the effect of spokespersons’ credibility in the public sector. In a study which evaluated the effectiveness of different types of celebrity in public service announcements, the Ohanian (1990) scale was used to assess the expertise, trustworthiness, attractiveness and credibility of the spokespersons (Toncar et al, 2007). In two studies conducted by Wheeler (2009) on the effectiveness of celebrity endorsers in a non-profit environment, celebrities closely connected to the organization through experience and proper fit were found to generate greater source credibility than a connected non-celebrity. The source credibility generated by the celebrity also created a positive impact on intention, which in this case was to donate time and money (Wheeler, 2009). The results reinforced the close relationship between experience/expertise and credibility as well as the importance of credibility on endorser effectiveness. The studies show that celebrity credibility is not only effective in consumer advertising but also in influencing people’s intention to perform public service.

Ohanian’s (1990) celebrity credibility scale has also gained favor and wide acceptance among researchers outside the U.S. In New Zealand, for example, the scale was used in a study aimed at helping marketing practitioners to select the most suitable celebrity athletes as endorsers (Charbonneau and Garland, 2006). Based on the Ohanian credibility scale, the study measured the potential endorsement fit of four sports celebrities for different types of products through a postal survey to the general public. The confirmatory factor analysis showed that the New Zealand data fitted Ohanian’s
tri-component source credibility scale well. More interestingly, the female athletes were found to receive much higher scores than male athletes for almost all products. The authors concluded that marketers should ‘seriously consider the females’ (Charbonneau and Garland, 2006, p.331) and use the Ohanian scale for assessing endorsement fit. Charbonneau and Garland’s (2006) study counts among the few studies which highlight the potential differences in the effects of female versus male celebrities.

The increasing use of celebrity endorsement in countries with rising consumption power over the last two decades has led to the growth of celebrity endorsement research in places as far afield as Asia and the Middle East. In the Philippines, the Ohanian scale was applied to a study on the effects of celebrity endorser versus non-celebrity and endorser credibility on consumers’ attitudes and purchase intention in the clothing industry (Rodriguez, 2008). The 15 indicators of the Ohanian scale were used to measure the credibility of the endorser in the study. The results showed that the higher the celebrity status of the endorsers in the advertisement, the higher the purchase intention of consumers. Of the 15 indicators of credibility, only ‘experienced’, ‘knowledgeable’, ‘qualified’ and ‘trustworthy’ were shown to have a significant influence on purchase intention.

Yoon, Kim and Kim (1998) conducted one of the early cross-cultural studies on the effects of source credibility on attitudes and behavioral intentions using the Ohanian scale. The dual objectives of the research were: (i) to investigate the effect of the source credibility dimensions on attitudes towards the brand, the ad and purchase intention and (ii) to determine if the underlying dimensions of source credibility
uncovered in the States would be applicable to a distinctly different culture such as Korea. In an experiment conducted in a classroom setting, various groups of students in an American university and a Korean university were shown different stimulus ads for a fictitious brand with varying conditions of endorser trustworthiness and expertise. Participants were asked to rate the perceived attractiveness, trustworthiness and expertise of the endorser in the test advertisement based on the Ohanian scale. They were also asked to indicate on a 3-item scale their intention to purchase the advertised product.

Compared to Ohanian (1990, 1991), Yoon, Kim and Kim’s (1998) findings revealed both similarities and differences in the two cultures. Their results showed that the dimensionality of source credibility was extremely similar between the U.S. and the Korean samples. However, the small variance in the beta coefficients of ‘attractiveness’, ‘expertise’ and ‘trustworthiness’ in the regression analysis led the authors to conclude that all three dimensions were found to be equally important to participants’ purchase intention in both samples, as well as participants’ involvement with the ad message (Yoon, Kim and Kim, 1998). This finding differs significantly from Ohanian’s (1991) study, which showed ‘expertise’ to be the only dimension influencing purchase intention. Emphasizing the importance of source credibility in determining consumers’ attitudes and purchase intention, the authors concluded with the recommendation that an endorser be evaluated on his/her attractiveness, expertise and trustworthiness before the advertising campaign (Yoon, Kim and Kim, 1998).

This section has introduced the tri-component Ohanian (1990) credibility scale comprising ‘trustworthiness’, ‘attractiveness’ and ‘expertise’ which was developed to
provide a reliable measurement for celebrity credibility. To illustrate the scale’s wide application both in and outside the U.S., it has also highlighted some of the research conducted in the Philippines, Korea and New Zealand which has applied and tested the scale. The results of these studies have all underlined the beneficial effect of celebrity credibility on advertising effectiveness mostly through its impact on purchase intention. While the dimensions of credibility have been found to be applicable to the countries in which the studies were conducted, their impact on purchase intention has revealed differences which may be due to cultural influences in the countries. The next section discusses the influence of culture on celebrity endorsement.

2.10 Cultural Influences in Celebrity Endorsement

Celebrities are cultural symbols that echo the symbolic meanings and values of their own culture (McCracken, 1989). The values and ideas of a particular culture may also play a part in the celebrity selection and creative execution of an advertising strategy (Choi, Lee and Kim, 2005). In order to maximize celebrity endorser effectiveness, there is a need to understand how endorser effects work in different cultures (Hung, Chan and Tse, 2011).

2.10.1 Cultural theories and differences

Many researchers in communications have referred to the cultural theories of Hofstede (1991) and Hall (1976). The most famous study on contemporary cultural differences is no doubt the one by Geert Hofstede (1991). Based on the employee scores collected by IBM between 1967 and 1973 in about 70 countries, Hofstede identified four major dimensions to help differentiate cultures: power distance, individualism, masculinity and uncertainty avoidance. A fifth dimension, long term orientation, was later added
after an additional study with a questionnaire specially designed for the Chinese managers and employees (Hofstede, 1991). Apart from the cultural dimensions of Hofstede, Hall’s concept of high- versus low-context culture is also widely applied to cross-cultural communication studies.

The issue of cultural differences is perhaps best exemplified in a major six-nation cross-cultural study conducted by Foscht, Maloles III, Swoboda, Morschett and Sinha (2008). Hofstede’s (1991) cultural dimensions were used to examine consumers’ perceptions of the energy drink Red Bull in six countries on three continents: U.K., Singapore, Austria, Germany, Netherlands and U.S.A. Red Bull was selected because its brand positioning was the same in all its markets. College students aged between 16 and 35 in the six countries were asked to complete questionnaires which included measures of brand personality and cultural dimensions. The results revealed considerable differences in the different consumer groups’ attitudes towards the brand as well as the cultural dimensions. Among the most notable differences were the cultural dimensions individualism and power distance. The results showed that Austria and Germany were high on individualism while the U.K., U.S.A and Singapore were low on individualism. Similarly, power distance also received significantly higher ratings in Austria than in the Netherlands and U.S.A. (Foscht et al., 2008). Since the same brand is perceived differently despite its identical positioning in all the countries, the study provides evidence that cultural differences can affect consumer perceptions.

Cultural differences between the East and West were confirmed empirically in a cross-cultural comparison using Hall’s concept of high- versus low-context cultures (Kim, Pan and Park, 1998). A 16-item survey instrument was developed to test the
concept based on existing scales that measured similar or related concepts in psychology and social psychology. The sample consisted of 96 business managers in the U.S. who represented a low-context culture and 96 business managers in Beijing and 50 managers in Seoul representing high-context cultures. The results confirmed the cultural differences between the high-context cultures of China and Korea and the low-context culture of the U.S. as conceptualized by Hall (Kim, Pan and Park, 1998). The findings of the study lend further support to the influence of culture on consumers’ perceptions and the differences between Eastern and Western cultures, hence the need for further insight into how celebrity endorsement works in different cultures.

2.10.2  Celebrity endorsement across cultures

Since cultural differences are likely to have an impact on consumers’ perceptions of advertising, the implementation of celebrity endorsement may also vary from culture to culture. Choi, Lee and Kim (2005) conducted a comparison of celebrity endorsement advertising in the U.S., a typical individualistic, low-context culture, and Korea, a collectivistic and high-context culture. Based on a content analysis of TV advertising in the two countries, the study showed that the cultural differences of the countries were reflected in the strategy and execution of celebrity endorsement. Korean celebrity advertising, for example, emphasized collectivism-related values more than the U.S. Another example is that in the U.S., a low-context culture, over half of the celebrities played themselves and addressed the audience directly, while nearly half of the celebrities in Korean TV commercials acted as a different character. Such differences in execution reflect some of the inherent cultural differences between the two countries which should be taken into consideration in order to maximize the effectiveness of celebrity advertising.
A recent cross-cultural study of celebrity endorsement and consumer perceptions in India and the U.S. (Biswas, Hussain and O’Donnell, 2009) identified both similarities and differences in consumers’ perceptions of celebrity advertising. Due to the lack of prior empirical cross-cultural research on the topic, the study was meant to be exploratory, employing focus group discussions with consumers from the two countries. Referencing once again the power distance cultural dimensions of Hofstede and the cultural contextuality of Hall, the study found that Indian consumers were more likely to be affected by the perceived status and glamour of the celebrity. On the other hand, in both countries, likability and glamour of the celebrities were the reasons for remembering the ads. Except in the case of domain experts such as athletes, celebrity ads were not found to be particularly believable or trustworthy in either country (Biswas, Hussain and O’Donnell, 2009).

To help expand the current literature on celebrity endorsement in Asia, La Ferle and Choi (2005) investigated the effectiveness of celebrity advertising in Korea in relation to attitudes towards the ad, the brand and purchase intention. The influence of the endorser’s perceived credibility was also studied using Ohanian’s (1990) celebrity credibility scale. The experiment using stimulus ads was administered to 275 Korean undergraduate students in a Korean university. The findings showed that, as in the U.S., Korean consumers’ reactions to celebrity endorsement were favorable. Similar to previous findings in the U.S., Korean consumers considered celebrities as more credible than non-celebrities. The fit indices indicated a good fit of the measurement model for celebrity credibility based on the Ohanian (1990) scale, thus confirming its applicability in the Korean market. Unlike the study by Ohanian (1991), perceived endorser credibility was found to have a strong influence on all the variables measuring
advertising effectiveness including purchase intention. This finding is in line with those of another study previously conducted in Korea by Yoon, Kim and Kim (1998), reaffirming thereby the differences in consumers’ responses to celebrity credibility and celebrity advertising in different cultures.

The results of La Ferle and Choi’s (2005) study echoed a similar study conducted earlier in Singapore (Pornpitakpan, 2003a, 2003b). In an effort to ascertain the applicability of Ohanian’s (1990) celebrity credibility scale in an Asian context, Pornpitakpan (2003a) sought to validate the factor structure of the scale by replicating Ohanian’s (1990) study in Singapore. A list of four Chinese celebrities and relevant product types was developed from a student sample of Singaporean students. Four versions of the questionnaire in English were then developed and administered to 880 Singaporean undergraduates. Four measurement models based on the Ohanian (1990) scale were tested using the structural equation modeling technique and assessed for their model fit. The results showed that the scale’s factor structure for ‘attractiveness’, ‘trustworthiness’ and ‘expertise’ fit the Singaporean data well. However, although only ‘expertise’ was found to affect consumers’ intention to purchase in Ohanian’s study (1991), all three dimensions of celebrity credibility (trustworthiness, attractiveness and expertise) were positively related to purchase intention in this study. Pornpitakpan’s (2003b) study provided further support to the hypothesis that consumers in different countries may respond differently to celebrity advertising due to cultural influences.

This section has presented the two major cultural theories most often applied in cross-cultural studies, Hofstede’s cultural dimensions and Hall’s theory of high versus low context cultures, together with examples of cross-cultural research studies which
support these theories. In addition, the research findings have shown that such cultural differences are also manifested in the way celebrity endorsement is implemented and in consumers’ perception of celebrity advertising in different countries. Although Ohanian’s (1990) celebrity credibility scale was found to be valid for Korea and Singapore, its effect on purchase intention in the two countries differed from the U.S. and warrants investigation. The next section explains the development of celebrity endorsement in China and the need for further research in the Chinese consumer market.

2.11 Celebrity Endorsement in China

As noted previously, the prevalence of celebrity advertising has become a worldwide phenomenon in the past decade (Schaefer, Parker and Kent, 2010). The use of celebrity endorsement is now one of the most popular advertising strategies in today’s global marketplace (White, 2004). Chinese advertisers and marketers are striving to maximize the use of celebrities to encourage consumption of products endorsed by those celebrities (Chan and Zhang, 2007). The growing popularity of celebrity endorsement in China is well reflected in a recent survey by a local Chinese television station which showed that about 30% of all prime time TV advertising featured celebrity endorsers (Song, Chaipoopiratana and Combs, 2008).

The demand for more research in the Chinese consumer market emerges clearly. Despite the growing economic importance of the Asia-Pacific region, little research on celebrity endorsement has been conducted in these countries such as China, S.Korea and India (La Ferle and Choi, 2005). With the world’s largest population and strong, consistent economic growth, China has become one of the most attractive consumer markets in the world (Brewer, 1997). Ranked currently as the world’s third largest
advertising market, China has an annual advertising expenditure of over 100 billion Yuan (Song, Chaipoopiratana and Combs, 2008). Both local and international companies are vying for a bigger share of and a stronger position in the world’s fastest growing consumer economy. For international advertising to be successful, advertising has to reflect the values of the local culture (Keegan, 1989).

This need for more research is accentuated by the changing Chinese consumer culture. Under the influence of Confucianism, Chinese cultural and consumer behaviors are generally believed to be quite unique and very different from the Western norm (Tong and Hawley, 2009). Unlike people in Western countries, Chinese people are still very much dominated by collectivist cultural values (Hung, Li and Belk, 2007). Compared to the U.S., China was rated twice as high on Hofstede’s power distance index (Hofstede, 1984). On the other hand, rapid economic growth has led to changes in Chinese people’s consumer culture and lifestyle. Research has shown that Chinese consumers in large cities have developed individualistic tastes and a tendency to adopt Western lifestyles (Paek and Pan, 2004). However, due to the potential differences in culture, there is considerable risk if Western advertising techniques are employed in China without careful pretest (Zhou and Belk, 2004).

As in the West, increasing use of celebrity advertising in China in recent years has created the need for celebrity endorsement research. With one of the fastest growing sports industries in the world, many of China’s ads employ celebrity athletes (Tsang, 2009), Yao Ming being the most notable. Because of the strong celebrity-worship culture among young people in China, celebrity endorsement is widely used in China to encourage young people to consume the endorsed products (Chan and Zhang, 2007).
A better understanding of consumers’ perceptions of celebrity advertising and how celebrity endorsement works in China is therefore essential.

Among the relatively few published consumer studies on celebrity endorsement conducted in China is the one by Liu, Huang and Minghua (2007). The objective of the research was to investigate the relationship between celebrity athlete endorsers’ attractiveness, match-up and consumers’ purchase intention. By manipulating endorser attractiveness levels (high/middle/low), endorser-product match-up (high/low) and product type, the experiment was conducted among undergraduates, graduates and MBA students of Beijing University in China. The results support previous research conducted in the U.S. that attractiveness is an important factor which influences consumers’ purchase intention. High attractiveness was found to be effective in positively influencing purchase intention regardless of the level of match-up. This led to the authors’ conclusion that highly attractive athlete endorsers should be used to increase consumers’ purchase intention (Liu, Huang and Minghua, 2007). Hence contrary to Ohanian’s (1991) findings, this study lends credence to the importance of celebrity attractiveness in influencing Chinese consumers’ purchase intention.

In one of the most recent studies on celebrity endorsement conducted in China, van der Veen and Song (2010) highlighted the issue regarding the role of trustworthiness in endorser effectiveness. Set in a tourism context surveying Mainland Chinese tourists’ intention to travel to Hong Kong, the exploratory study tested the tri-component Ohanian credibility scale as a measurement of the perceived image and advertising effectiveness of celebrity endorsers. Based on the results of the exploratory factor analysis, three variables (dependable, reliable and sincere) belonging to ‘trustworthiness’
were deleted and the remaining two variables (honesty and trustworthiness) grouped under ‘expertise’ due to cross-loading. The authors supported the removal of the ‘trustworthiness’ construct from the scale quoting Ohanian’s (1991) comment that respondents do not expect trustworthiness from individuals who are paid to promote a product. An expanded five-factor scale including three factors on attitudes and visitation intention was validated through confirmatory factor analysis. The deletion of ‘trustworthiness’ in this study shows that a celebrity’s trustworthiness may not be considered as important in China as in the U.S. (Ohanian, 1990), Singapore (Pornpitakpan, 2003a) and S.Korea (La Ferle and Choi 2005).

While Van der Veen and Song’s (2010) study has revealed interesting differences in consumers’ perceptions of celebrity endorsers in China and other parts of Asia, its strength as a valid test of the Ohanian scale is subject to debate. Although it sought to increase the generalizability of the study through the use of a general consumer sample, the sample size of 195 was relatively small. Since the study was conducted within the specific context of tourism, the narrowness of the scope of study further limits the generalizability of its findings to the broader context of frequently-purchased consumer products. The major shortcoming of the study lies in the way the instrument was developed for the research based on ‘most frequent mentions’ by a group of respondents in a pre-test, which resulted in the use of a picture of Hong Kong’s harborfront (perceived by most respondents to be representative of Hong Kong) and several local and international celebrities (mentioned by most respondents as celebrities whom they remembered). The complete absence of a conceptually meaningful relationship between the celebrity and the ‘product’ significantly reduced the effectiveness of the study as an assessment of the Ohanian scale as a valid tool to measure a celebrity’s
perceived image or credibility.

In brief, this section has underlined the increasing importance of celebrity advertising outside the U.S., particularly in high-growth markets such as China. As one of the world’s largest consumer markets, China has witnessed a significant increase in the use of celebrity endorsement in recent years. However, research on consumers’ perceptions and responses vis-à-vis celebrity advertising in China has so far been limited and inadequate. In view of the potential differences between Chinese and Western as well as other Asian cultures, there is a need for more research in the Chinese consumer market.

2.12 The Research Project

The literature review has shown that celebrity selection and endorser effectiveness are two key concepts in celebrity endorsement research and major topics of interest for academics and practitioners. In trying to determine the essential characteristics of an effective celebrity endorser, many have turned to the source effect theories in communication, which emphasize the importance of the source for the effectiveness of the message. Hovland et al.’s (1953) source credibility model and McGuire’s (1985) source attractiveness model have provided the major frameworks for such research. The multi-dimensional nature of source credibility and source attractiveness as suggested by Hovland et al. (1953) and McGuire (1985) has formed the basis of the research into what constitutes an effective endorser. Since the persuasive effect of credibility has been well demonstrated in early research, recent celebrity endorsement research efforts have focused on ascertaining the dimensions of credibility and their contribution to endorser effectiveness.
Based on the research of source credibility and source attractiveness, ‘trustworthiness’, ‘expertise’, ‘attractiveness’, ‘liking’ and ‘familiarity’ are among the qualities most often associated with endorser credibility. The Performer Q score commonly used by marketing practitioners to evaluate a celebrity’s suitability reflects his/her popularity/familiarity and likability. All these qualities have been shown to have a positive effect in the communication process, although their impact on purchase intention has yet to be determined. Celebrity endorsement research has demonstrated that their effects can sometimes be more cognitive than behavioral – enough to induce positive attitude change but sometimes not enough to induce purchase action.

Despite the heavy use of celebrity advertising in China, limited research has so far been conducted. The tri-component source credibility scale on ‘trustworthiness’, ‘expertise’ and ‘attractiveness’ developed by Ohanian (1990) is the most authoritative and widely-used measurement of celebrity credibility to date. However, although its factor structure has been validated in a number of countries outside the U.S. such as South Korea and Singapore, a tourism study in Guangzhou has found it to be not entirely valid for the Chinese consumer market. Findings on the effect of the three dimensions on consumers’ purchase intentions have also been inconclusive. Ohanian’s (2001) study showed that only ‘expertise’ had a positive impact on purchase intention, while a study conducted in Beijing has confirmed the positive impact of celebrity attractiveness on purchase intention (Liu, Huang and Minghua, 2007). In contrast, all three dimensions were shown to have a positive impact in Pornpitakpan’s (2003b) and La Ferle and Choi’s (2005) studies.’
2.12.1 The research gap

Despite all the research on celebrity endorsement, there is yet no agreement on what characteristics an effective endorser should have, or what advertising effect a celebrity endorser is likely to have on consumers’ behavioral intentions. Research on celebrity endorsement has underlined the importance of endorser source credibility for advertising effectiveness but offers no definitive answer to what constitutes source credibility.

The literature review has also revealed a lack of research on gender differences in celebrity endorsement. The match-up hypothesis’ focus on endorser-product congruence and the matching of the image of the endorser and product points to the potential effects which different types of endorsers may have in the endorsement process. The positive effect of using a male model with a masculine product and a female model with a feminine product as demonstrated in Kanungo and Pang’s (1973) seminal study has highlighted the interaction between model type and advertising effectiveness. Nevertheless, not much attention has so far been paid to the issue of endorser gender in celebrity endorsement research. In one of the relatively few experiments devoted to the examination of the effects of endorser type and gender using a 4x2x2 design, the overall results led to the author’s conclusion that the endorser’s gender was not particularly important for the selection of a spokesperson, even though some mean values were more favorable towards the male (Freiden, 1984). However, female athletes were found to receive much higher scores than the males in a study by Charbonneau and Garland (2006) using the Ohanian (1990) model to measure the endorsement fit of sports celebrities. A study by Natarajan and Chawla (1997) also showed that consumer responses to male and female endorsers were different and called
for more research into the role of the celebrity’s gender.

Limited research on celebrity endorsement has been conducted in Asia and is therefore warranted, particularly on a rising economic power like China. A better understanding of the effect of celebrity source credibility in the Chinese market is essential. The early findings of Geert Hofstede’s study (1984) highlighted the strong cultural differences between the U.S. and Asian countries, and McCracken’s (1989) research has further emphasized the influence of cultural meanings residing in celebrities. While the authoritativeness of the Ohanian scale cannot be disputed, its applicability as a celebrity selection tool to the changing Chinese consumer market appears yet to be confirmed.

As an integral part of China, Hong Kong is a good testing ground for the application of concepts and measures in the Chinese market. As in the West, celebrity endorsement has been a common promotion strategy in Hong Kong. Due to its strategic location on the southern coast of China, Hong Kong has long served as the gateway to China for the rest of the world. With the opening up of China and China’s emergence as one of the world’s largest economies, Hong Kong has benefited further from the huge daily influx of Mainland Chinese visitors whose major interest is to shop for branded consumer goods. It has attracted all major international luxury brands to set up flagship stores in Hong Kong and invest in advertising and promotion to target the brand-conscious, materialistic Hong Kong Chinese as well as their ‘nouveau riche’ counterparts from Mainland China. Hong Kong offers therefore an ideal environment for testing western concepts and theories on Chinese consumers.
From a theoretical perspective, conducting this study in Hong Kong will be of particular benefit to the understanding of the dynamics of the large, diverse consumer Chinese market. Hong Kong’s status as a world city is worthy of a ‘city state’ treatment (Fam and Grohs, 2007). Unlike Singapore, Hong Kong is a cosmopolitan Chinese city which forms a part of China. A former British colony, Hong Kong is several decades ahead of Mainland China in terms of Western social and cultural influences. As a result, it is in many ways regarded as a ‘role model’ by the Mainland Chinese cities. Hong Kong Chinese celebrities are often employed as spokespersons in Mainland China and the Mainland Chinese like to follow the fashion and food trends in Hong Kong. Nevertheless, celebrity endorsement research has so far been limited in Hong Kong. A better understanding of Chinese consumers in a Chinese city which is similar to the U.S. facilitates the identification of cultural influences on consumer attitudes and responses. Comparison of the Hong Kong findings with other research conducted in Mainland Chinese cities can also shed light on the potential differences in the responses of different Chinese consumers in various stages of economic development to celebrity endorsement.

The selection of Hong Kong as the sample frame will make significant contribution to practice. Hong Kong has a very highly-developed advertising industry and is the regional advertising capital of Asia (Ha, 1998). Many multinational advertising agencies have their greater China or Asia regional office headquartered in Hong Kong. The findings of this study particularly with regard to celebrity selection can help these top-notch advertising professionals in Hong Kong to fine-tune their regional and local celebrity endorsement strategies in Asia, particularly Greater China. As the Chairperson of the Hong Kong Advertisers Association noted, in view of the increasing
use of celebrities, the No.1 task for ad professionals in Hong Kong is to use their creativity to make the best use of celebrities in advertising (HK2A, 2006). An understanding of the essential characteristics of an effective endorser and how these dimensions influence purchase intention will help Hong Kong advertising professionals to develop more effective promotions and campaigns involving celebrities. Since Mainland China still relies very much on Hong Kong for the supply of experienced Chinese-speaking advertising professionals, the insight provided by this study for Hong Kong will eventually benefit the less sophisticated but fast-growing advertising industry in Mainland China.

2.12.2 The research topic

Given the importance of celebrity endorsement in modern day advertising, especially in China, the purpose of this research is to facilitate the selection of celebrity endorsers through the development and validation of an effective scale to measure the credibility of a celebrity endorser and to test the likely implications of the dimensions on consumers’ behavioral intentions. It also aims to provide a better understanding of the role which endorser gender plays in the celebrity endorsement process. The Ohanian (1990) celebrity credibility scale is to be validated among Chinese consumers in Hong Kong to assess its applicability in the Chinese market. The study also serves as an extension of other Asian studies by La Ferle and Choi (2005) and Pornpitakpan (2003a) to provide further assessment of the scale’s generalizability in an Asian context.

Though developed in 1990, the Ohanian (1990) credibility scale is considered the most authoritative measurement of celebrity credibility due to its rigor and generalizability. The items for the scale were developed from an extensive review of previous source
credibility scales. Unlike most other studies using student samples, the representativeness of the sample in Ohanian’s (1990) study consisting of both students and civic groups was increased through the use of the systematic area-sampling technique to survey households in census tract areas. The resultant scale was developed through two exploratory and two confirmatory studies. A rigorous analysis to overcome the methodological weakness of previous research included validity and reliability testing.

The Ohanian (1990) scale has remained to this day the most accepted and widely-used source credibility scale in celebrity endorsement research. Although many source credibility models had been developed prior to Ohanian’s (1990) study, few notable models have been developed after the Ohanian celebrity credibility scale and none can be compared to Ohanian’s (1990) in terms of sample representativeness, rigor and overall generalizability, including a more recent effort by Newell and Goldsmith (2001) to develop a scale to measure perceived corporate credibility. It is not surprising that the Ohanian scale continues to be a standard tool of measurement of source credibility, particularly celebrity credibility, around the world (eg. Charbonneau and Garland, 2006; Rodriguez, 2008; Toncar et al., 2007; Wheeler, 2009; Yoon, Kim and Kim, 1998).

In order to provide a more comprehensive scale of measurement, the Ohanian scale is expanded to include ‘familiarity’ and ‘likability’ from the attractiveness model. ‘Familiarity’ and ‘likability’ are the two key measures which constitute the Performer Q score. The inclusion of these two dimensions should complement the existing scale and provide a more rounded definition of the credibility construct. The five dimensions have also been confirmed by a recent meta-analysis of celebrity
endorsement literature on the relationship between celebrity endorser effects and advertising effectiveness (Amos, Holmes and Strutton, 2008). According to this analysis, the source credibility model composed of celebrity trustworthiness, celebrity expertise and celebrity attractiveness captures the three most influential source effects on purchase intentions, followed by familiarity and likability (Amos, Holmes and Strutton, 2008).

Similar to Ohanian’s (1990) study, the effect of celebrity credibility as defined by the dimensions of the expanded credibility scale is measured by the respondents’ purchase intentions. Since the literature review has indicated that the impact of the credibility dimensions may be cognitive rather than behavioral, the measures ‘consider purchasing’ (cognitive) and ‘actually purchase’ (behavioral) are used to differentiate between the two. As in the Ohanian (1990) study, separate measures are used for purchasing ‘for self-use’ and ‘for gift-giving’.

To help identify the potential differences in the effects of endorsers’ gender on consumers’ attitudes and advertising effectiveness, both male and female endorsers will be rated in this study and the results analyzed separately for comparison. Although the results of Ohanian’s (1990,1991) and Pornpitakpan’s (2003a, 2003b) studies have not revealed any significant differences between the male and female endorsers, it is possible that differences do exist in the Hong Kong Chinese market. Since past research on gender differences in celebrity advertising has been scant and inconclusive, this study may shed new light on consumers’ responses to male versus female celebrity credibility in terms of the impact of different credibility dimensions on purchase intention.
The objectives of this research are therefore:

1. To confirm the applicability of Ohanian’s (1990) tri-component celebrity credibility scale in the Hong Kong Chinese market.

2. To develop a more comprehensive measurement of celebrity credibility by expanding the existing scale to include two other dimensions of source attractiveness, ‘familiarity’ and ‘likability’.

3. To measure the effect of the five credibility dimensions on Hong Kong consumers’ purchase intentions.

4. To ascertain the potential differences in the effect of male versus female celebrity credibility on consumers’ purchase intention.

2.12.3 The research hypotheses

The Ohanian (1990) scale has confirmed ‘attractiveness’, ‘trustworthiness’ and ‘expertise’ to be the three key dimensions of credibility. The relationship between ‘trustworthiness’ and ‘expertise’ (which formed the platform of Hovland and Weiss’ (1953) source credibility model) and credibility was well documented in the research of Applbaum and Anatol (1972), Bowers and Philips (1967), Friedman, Santeramo and Traina (1978), Patzer (1983) and Whitehead (1968). Long considered as a key element of spokesperson effectiveness, ‘attractiveness’ was confirmed to be linked directly to credibility (eg. Baker and Churchill, 1977; Patzer, 1983). The verification of the Ohanian scale’s (1990) factor structure in subsequent research (eg. Pornpitakpan 2003a; La Ferle and Choi, 2005; Yoon Kim and Kim, 1998) and the successful application of the scale both in and outside the U.S. (Charbonneau and Garland, 2006; Toncar, Reid and Anderson, 2007; van der Veen and Song, 2010; Wheeler, 2009) in recent research have provided further support for the three dimensions as defining
qualities of celebrity credibility.

Since a major objective of employing celebrities in advertising is to drive sales (Lear, Runyan and Whitaker, 2009; Miciak and Shanklin, 2009), ‘purchase intention’ has often been used as a measurement of the effectiveness of celebrity advertising. The positive effect of a celebrity on purchase intention was confirmed in the research of Atkin and Block (1983), Friedman, Termini and Washington (1976), Friedman and Friedman (1979), Kamins (1989), Kamins, Brand, Hocke and Moe (1989) and Mowen and Brown (1981). Research on celebrity credibility has suggested/confirmed its positive impact on purchase intention (eg. Choi and Rifon, 2007; Tripp, Jensen and Carlson, 1994). The three dimensions - ‘trustworthiness’, ‘expertise’ and ‘attractiveness’ - have been separately or jointly shown to positively influence purchase intention in many studies (Kahle and Homer, 1985; La Ferle and Choi, 2005; Liu, Huang and Minghua, 2007; Ohanian, 1991; Pornpitakpan, 2003b; Rodriguez, 2008; Till and Busler, 1998; Yoon, Kim and Kim, 1998).

In line with Ohanian (1991), it is therefore hypothesized that the attractiveness, trustworthiness and expertise of the celebrity endorser will have a positive impact on Hong Kong Chinese consumers’ purchase intention. The following three hypotheses have been developed for this research based on the Ohanian (1991) study:

**Hypothesis 1:** The celebrity endorser’s perceived attractiveness will positively influence consumers’ purchase intention in Hong Kong

H1a Perceived attractiveness will positively influence consumers’ intention to consider purchasing the endorsed product for self-use
Perceived attractiveness will positively influence consumers’ intention to definitely purchase the endorsed product for self-use and gift-giving

**Hypothesis 2**: The celebrity endorser’s perceived trustworthiness will positively influence consumers’ purchase intention in Hong Kong

H2a  Perceived trustworthiness will positively influence consumers’ intention to consider purchasing the endorsed product for self-use and gift-giving

H2b  Perceived trustworthiness will positively influence consumers’ intention to definitely purchase the endorsed product for self-use and gift-giving

**Hypothesis 3**: The celebrity endorser’s perceived expertise will positively influence consumers’ purchase intention in Hong Kong

H3a  Perceived expertise will positively influence consumers’ intention to consider purchasing the endorsed product for self-use and gift-giving

H3b  Perceived expertise will positively influence consumers’ intention to definitely purchase the endorsed product for self-use and gift-giving

In addition, since the Performer Q score most commonly used in celebrity selection by practitioners is calculated based on a celebrity’s popularity/familiarity and likability, these two dimensions are hypothesized to form an important part of celebrity credibility. ‘Familiarity’ and ‘likability’ are generally viewed as sub-components of ‘attractiveness’ (Buhr et al., 1987; McGuire, 1985). They have often been linked to an effective communicator or celebrity endorser (eg. Choi and Rifon, 2007; Freiden, 1984;
Friedman and Friedman, 1979; O’hara et al., 1991, Synder and Rothbart, 1971; Weisbuch and Mackie, 2009). The positive effects of ‘familiarity’ and ‘likability’ on attitude/behavioral change have been well demonstrated (eg. Chebat et al., 1992; Joseph, 1977; Premeaux, 2005; Reinhard et al., 2006). Due to their close relationship with source attractiveness, the two dimensions are also hypothesized to have a positive impact on consumers’ purchase intention in this research. Two hypotheses have been developed as follows:

**Hypothesis 4:** The celebrity endorser’s familiarity will positively influence consumers’ purchase intention in Hong Kong

- **H4a** Perceived familiarity will positively influence consumers’ intention to consider purchasing the endorsed product for self-use and gift-giving
- **H4b** Perceived familiarity will positively influence consumers’ intention to definitely purchase the endorsed product for self-use and gift-giving

**Hypothesis 5:** The celebrity endorser’s likability will positively influence consumers’ purchase intention in Hong Kong

- **H5a** Perceived likability will positively influence consumers’ intention to consider purchasing the endorsed product for self-use and gift-giving
- **H5b** Perceived likability will positively influence consumers’ intention to definitely purchase the endorsed product for self-use and gift-giving

Although gender has not been a major issue in celebrity endorsement research, this literature review has highlighted potential differences in consumers’ responses to a male versus a female celebrity (Charbonneau and Garland, 2006; Kanungo and Pang, 1973; Freiden, 1984; Nataraajan and Chawla, 1997). The following hypothesis has therefore
been developed for testing in this research:

**Hypothesis 6:** The impact of the dimensions of male celebrity credibility on consumers’ purchase intention are different from the impact of the dimensions of female celebrity credibility

### 2.13 Conclusion to Chapter Two

This chapter has presented the major literature which forms the basis of the current research project. After a summary of the key concepts in celebrity endorsement research, the major influences and theoretical frameworks were introduced. Highlights of the early literature on celebrity endorsement confirmed the multi-dimensionality of celebrity credibility and the importance of celebrity source credibility and attractiveness for advertising effectiveness. The review of more recent research which followed provided further evidence for the importance of celebrity credibility in endorsement advertising. Among the efforts of researchers over the past two decades to identify the essential characteristics was Ohanian’s (1990) celebrity credibility scale. However, a review of major cross-cultural studies and studies conducted in Asia in recent years has revealed both similarities and differences between Ohanian’s (1990) U.S. study and others (La Ferle and Choi, 2005; Liu, Huang and Minghua, 2007; Pornpitakpan, 2003a, 2003b). In view of the literature and emergent questions surrounding the measurement of celebrity credibility and its effects on consumer responses, the chapter ended with a summary of hypotheses to be tested in the proposed study.
CHAPTER THREE
RESEARCH METHODS

3.1 Introduction

The literature review in the previous chapter has identified five key dimensions of ‘source credibility’ based on past research. Whether these dimensions are applicable to the Chinese market and their effect on consumers’ purchase intentions have yet to be confirmed. Chapter 3 details the methodology used for collecting and analyzing the data to first verify the factor structure of an expanded Ohanian (1990) source credibility scale in the Hong Kong market and then to test the applicability of the dimensions to advertising strategy in Hong Kong. In doing so, the study first discusses the research design and the analytical procedures used to verify the structure of the proposed five-factor scale. It also describes the methods and procedures employed for ascertaining the impact of the dimensions of celebrity source credibility on Hong Kong consumers’ intention to purchase.

This chapter is divided into 11 sections. The introduction in Section 3.1 is followed by research design (Section 3.2) and justification for the data collection method (Section 3.3). Section 3.4 covers the topic of sampling including sample selection and sample size. Operational definitions (Section 3.5) are followed by details of questionnaire design and pretest (Section 3.6) and survey administration (Section 3.7). Section 3.8 justifies the statistical tools and methods employed to analyze the data and Section 3.9 discusses the major limitations of the research. The chapter ends with a discussion of the major limitations of the methodology (Section 3.10) and concluding comments (Section 3.11).
3.2 Research Design

After identifying the problem situation and developing the theoretical framework of the research, the next step is to design the research so that the necessary data can be collected and analysed to arrive at a solution (Sekaran and Bougie, 2010). A research design is a ‘master plan’ of the research methods and procedures which are to be used in data collection and analysis of the research (Zikmund, 1997). A good design uses accurate and economical procedures to collect data which are in line with the objectives of the research (Kinnear & Taylor, 1996).

A cross-sectional, descriptive research design is used for this study. Depending on the purpose of the study, research designs can be exploratory, descriptive or causal (Neuman, 1997). Descriptive research helps to describe and measure a phenomenon, providing thereby a better understanding of the research problem (Zikmund, 1997). Unlike exploratory research, which is used to gain background information or explore a new topic, descriptive research is based on some previous understanding of a research problem (Zikmund, 1997). While exploratory research can be quite flexible, descriptive research usually adopts a highly structured and rigid approach to data collection (Churchill, 1995). Since this study has identified the key dimensions of source credibility and formulated hypotheses based on previous research, descriptive research is appropriate. Having defined the construct of celebrity credibility, this study helps to test its applicability as well as the relative strength of the factors which influence purchase intention. Since the objective of the study was to collect data that would be relevant to answering a specific research question rather than understanding the before-and-after effects of change, data collection at one point in time was considered sufficient for the purpose of the research, and a cross-sectional study, as
opposed to longitudinal multi-point or before-and-after studies, was preferred (Sekaran and Bougie, 2010).

3.3 Data Collection Method

Data can be collected from either primary or secondary sources. Primary data is firsthand information which is obtained specifically for the purpose of the research. Secondary data refers to existing information such as company records and publicly available information. While secondary data involves less time and money to collect, it can easily become obsolete and is usually not sufficient to meet the needs of the specific situation (Sekaran and Bougie, 2010). In this study, primary data is needed to validate the dimensions of the latent construct, credibility, and to test the strength of relationships between different variables of interest.

The choice of data collection method depends very much on the type of research and the nature of the research question (Tharenou, Donohue and Cooper, 2007). Data collection is the process through which information about a research topic is collected, classified and categorized (Churchill, 1995). Major methods commonly used by researchers to collect primary data are experiment, observation and survey (Zikmund, 2003). Experimental research is mostly used for cause-and-effect studies as it allows the investigator to have greater control of the research situation than other methods such as survey (Zikmund, 2003). Although observation can help the investigator to understand a wide range of behavior, cognitive phenomena such as attitudes and preferences cannot be observed (Kinnear and Taylor, 1996). The survey method was therefore considered more appropriate for this study on celebrity credibility and consumers’ purchase intention. Apart from providing an accurate means of evaluating
data about a population, the survey method represents a quick and relatively
cost-efficient way of collecting data (Zikmund, 2003). It has also been widely used in
celebrity endorsement research including the studies by Ohanian (1990, 1991) and

While each survey method has its advantages and disadvantages (Zikmund, 2003), an
attempt was made to maximize the strengths of different survey methods. The
three major survey methods used to collect data are personal interviews, telephone or
computer-aided interviews, and mail or self-administered questionnaires (Kinnear &
Taylor, 1996). Mail questionnaire surveys (now usually in the form of internet studies
in today’s electronic age) are the most popular as they can cover a wide, disperse area
(Fox, Robinson and Boardley, 1998). Although this type of self-administered
questionnaire survey is quicker and cheaper to administer, it has the disadvantages of a
low response rate and greater risk of missing data (Bryman and Bell, 2007). Personal
interviews, which are more costly to administer, allow the researcher to clarify doubts
and detect non-verbal cues from the respondent (Sekaran and Bougie, 2010). For this
study on celebrity credibility, a ‘personally administered questionnaire survey’
represented a cost-effective option as it enabled the researcher to encourage
participation and provide clarification where necessary (Sekaran and Bougie, 2010).
Questionnaires are an efficient data collection tool for researchers who know the exact
requirements and ways to measure the variables (Sekaran and Bougie, 2010).
Allowing the respondents to complete the questionnaire by themselves also saved time
and their anonymity was guaranteed through placement of completed questionnaires
directly in the researcher’s collection box.
In short, this section has justified the data collection used in the study. A questionnaire survey to collect primary data was considered most appropriate for this research. A survey is a quick and easy way to collect data and is widely used in key research studies on celebrity endorsement. A cost-effective way to administer the questionnaire was to have the respondents complete the questionnaire by themselves in the presence of an interviewer. It saved time while allowing the interviewer to clarify any doubts that the respondent might have. The next section addresses the major sampling issues.

3.4 Sampling

Sampling constitutes a key step in the research process (Bryman and Bell, 2007). In most research investigations, it is practically impossible to collect data from the whole target population due to time, cost, and other human resource constraints (Sekaran and Bougie, 2010). Sampling involves the selection of a small number of units of a given population as a basis for drawing conclusions about the entire population (Zikmund, 2003). Major steps in the sampling process include defining the population, determining the sampling frame and sample size and executing the sampling process (Sekaran and Bougie, 2010). These steps are discussed in turn.

3.4.1 Target population

Two key considerations in defining the target population are the research objective and the scope of the study (Sekaran and Bougie, 2010). Properly identifying the source from which the data are to be collected is vital at the beginning of the sampling process (Zikmund, 2003). Since the objective of the study is to identify the multi-dimensionality of celebrity credibility and to assess its impact on purchase intention in a Chinese market, the target population ideally should be all Hong Kong
Chinese consumers. However, since a conceptual understanding of celebrity advertising was required of the respondents in this research, a minimum age was considered a prerequisite. It was decided that the target population of the study should be all Hong Kong residents aged 18 and above, which represent about 82% of the total Hong Kong population. It was also believed that adult consumers, who are mature enough to make their own purchase decisions, were more appropriate for this study.

3.4.2 Sampling design

The choice between probability and non-probability sampling design depends once again on the purpose of the research, the generalizability required, the demands of time and other resources available (Sekaran and Bougie, 2010). Probability sampling is a more rigorous and accurate sampling technique than non-probability sampling. In probability sampling, different members of a population have a known chance of selection. This can eliminate researcher bias and ensure generalizability of the findings (Zikmund, 2003). However, it is also more costly and time-consuming. In non-probability sampling, selection is arbitrary and the probability of any particular member of the population being chosen is not known (Zikmund, 2003). Despite the low generalizability of non-probability sampling designs, they can sometimes be most suitable for the researcher’s purpose (Zikmund, 2003) or “the only viable alternative for the researcher” (Sekaran and Bougie, 2010, p.278).

A non-probability convenience sampling design was used for the study. Major studies which have tested or applied the Ohanian scale have mostly adopted a similar design using university students (La Ferle and Choi, 2005; Pornpitakpan, 2003a, 2003b; Till and Busler, 2000). It is a convenient and economical procedure which selects the
people most readily available (Zikmund, 2003). The use of convenience sampling is more suitable for this study on the general Hong Kong population than other types of non-probability sampling. Other types include judgment or purposive sampling and quota sampling, which select the sample based on individual judgement or certain characteristics of specific target groups (Zikmund, 2003). Convenience sampling is very common and is more widely used in the field of business and management than probability sampling (Bryman, 1989). Despite the problem of generalization, the data from convenience sampling can shed light on existing findings or provide a platform for future research (Bryman and Bell, 2007).

3.4.3 Sampling frame

In the absence of a proper sampling frame for non-probability convenience sampling, the locale where the survey was conducted represents the sampling frame of this study. The sampling frame is a listing of all units in the population from which the sample will be drawn (Bryman and Bell, 2007). For this study, the sampling frame was therefore the area where the survey was conducted and the sampling units were passers-by who were Chinese adults aged 18 and above. To ensure that the survey reflects the opinions of Hong Kong people, a filter question at the beginning of the survey helped to screen out non-Hong Kong residents who were passing through the area. Since the locale for the study affects the response rate and the representativeness of the sample (Zikmund, 2003), the choice of the locale was carefully made to ensure that the area was likely to be frequented by Chinese adults of all ages and income brackets. The site of the survey, a covered footbridge in a traffic hub connecting to a busy shopping and office area, was selected to guarantee safety and comfort with a high flow of pedestrians from different sectors of the community.
3.4.4 Sample size

When determining the sample size, three major considerations are: time and cost, heterogeneity of the population and the analyses to be undertaken (Bryman and Bell, 2007). Roscoe (1975) has suggested that an appropriate sample size for most research is between 30 and 500 and that it should be several times, preferably at least ten times, as large as the number of variables in the case of multivariate analysis. The decision on sample size for this research was primarily based on the requirements of factor analysis, which was to be the key analytical technique employed in the study. The preferred sample size for factor analysis is at least 100, with a minimum of 5 cases per variable (Hair, Anderson, Tatham and Black, 2010). Since there is a total of 21 indicators for the five credibility dimensions, the minimum size should be between 100 and 125. As the survey involves the rating of two celebrities, one male and one female, the total sample size had to be at least 250. To allow for the possibility of non-usable responses, an extra 50 surveys was collected to add up to a total sample of 300.

3.4.5 Executing the sampling process

The street intercept method was used to sample eligible passers-by in the designated area during the time of data collection. Street intercept is most cost-effective in urban areas with a geographically-clustered target population as is the case in Hong Kong (Miller, Wilder, Stillman and Becker, 1997). Street and mall intercepts are the two major consumer intercept methods, which select respondents in a central location (Green, 1988). Despite the disadvantage of dealing with busy and sometimes unwilling subjects in a public place (Green, 1988), this type of survey is quick and less costly to administer as there is no travelling time and cost involved (Zikmund, 2003). The site of the survey was inside a covered footbridge linking the Hong Kong/Kowloon
Cross Harbour Tunnel bus station in Hung Hom on one side and the Kowloon Canton Railway Station all the way to Tsim Sha Tsui East – a major shopping and office area – on the other side. Passers-by were intercepted and invited to take part in the survey.

To help increase the generalizability of the survey, participants were selected systematically. Some researchers believe that the findings of consumer intercepts may be projected to the ‘universe’ represented by the population intercepted if the research design can ensure that all consumers can have an equal chance of selection (Green, 1988). The data collected are considered to be suitable for advertising research, particularly if there is an element of objectivity involved (Lautman, Edwards and Farrell, 1981). One way to achieve objectivity and reduce selection bias is to select respondents systematically, with every third adult passer-by selected for the sample (Sudman, 1980). In the case where the third passer-by was non-eligible, he/she was skipped and the next third passer-by selected.

In summary, this section has discussed the major sampling issues in this research. Hong Kong residents aged 18+ (based on initial screening by the filter question) who are capable of making their own purchase decisions were chosen as the target population of this study. Non-probability convenience sampling was used and a total sample of 300 was deemed necessary according to the requirements of factor analysis. The survey employed the street intercept method which is particularly suitable for highly populated areas like Hong Kong. To help reduce selection bias, every third passer-by was invited to participate.
3.5 Operational Definitions

Having discussed the sampling method and procedures for the research, this section deals with the issue of operationalization. Concepts have to be operationalized before they can be measured (Zikmund, 2003). Operationalization involves the reduction of abstract concepts to make them measurable (Sekaran and Bougie, 2010). Major steps in concept operationalization include: defining the construct to be measured, developing an instrument (one or a set of items or questions) to measure the concept and choosing a response format (Sekaran and Bougie, 2010).

3.5.1 Definition of key constructs

Celebrity Credibility

Celebrity credibility is defined as ‘the extent to which the source (in this case, the celebrity) is perceived as possessing expertise relevant to the communication topic and can be trusted to give an objective opinion on the subject’ (Goldsmith et al., 2000, p.43). The literature review has confirmed the multi-dimensionality of the ‘credibility’ construct and resulted in the development of a proposed new celebrity source credibility model with five dimensions. In addition to ‘expertise’ and ‘trustworthiness’ of Hovland’s source credibility model, the expanded definition in this study includes the two dimensions, ‘familiarity’ and ‘likability’, of the source attractiveness model. Celebrity endorsement literature has also shown that these five attributes appear to have the greatest impact on purchase intention.

Purchase Intention

Purchase intention is one of the major outcome variables in advertising effectiveness research (Goldsmith and Lafferty, 2000). In the brand choice context, ‘purchase
intention’ can be defined as a ‘type of judgement about how in the present context, a consumer will behave towards a particular brand’ (Biehal, Stephens and Curlo, 1992, p.21). It is one of a small set of variables which are regularly used in consumer research (Kalwani and Silk, 1982). Researchers in social psychology believe that the best way to predict a person’s behavior is to measure his intention to perform that behavior (Fishbein and Ajzen, 1975). In this study, ‘purchase intention’ is the respondent’s intention to purchase the product which the respondent believes the celebrity is most suitable for endorsing. As pointed out by Kalwani and Silk (1982), measurement of purchase intention has become quite standardized through the use of either an intention scale or a purchase probability scale. To facilitate comparison, this study uses the same seven-point semantic differential intention scale as in Ohanian’s (1991) study, which will be explained in greater detail in the following section.

3.5.2 Instrument development
Once the constructs have been defined, the best way to develop an instrument is to look for existing measures of the concepts in the literature (Sekaran and Bougie, 2010). Adapting existing measures to one’s own research can help save time and energy. It also enables the researcher to verify previous findings and build on the work of other researchers (Sekaran and Bougie, 2010). The tri-component source credibility scale on ‘trustworthiness’, ‘expertise’ and ‘attractiveness’ developed by Ohanian (1990) with its fifteen indicators, five for each dimension, is one of the most widely used scales in celebrity endorsement literature. It has been applied in numerous studies in the U.S., including the work of influential researchers such as Till and Busler (1998). It has also been validated for Singapore (Pornpitakpan, 2003a) and South Korea (La Ferle and Choi, 2005) and therefore is adopted in the current study.
Based on Ohanian’s (1990) celebrity credibility scale, seven-point bipolar differential scales were used to measure the dimensions of source credibility (details of the scale will be provided in the next section). The three dimensions of source credibility, ‘trustworthiness’, ‘expertise’, and ‘attractiveness’, were operationalized as three composite variables, each with five indicators:

- **‘expertise’** – expert/not an expert, experienced/inexperienced, knowledgeable/unknowledgeable, qualified/unqualified, skilled/unskilled

- **‘trustworthiness’** – dependable/undependable, honest/dishonest, reliable/unreliable, sincere/insincere, trustworthy/untrustworthy

- **‘attractiveness’** – attractive/unattractive, classy/not classy, beautiful/ugly, elegant/plain, sexy/not sexy

Since the Ohanian scale does not include ‘likability’ and ‘familiarity’, measures for these two dimensions had to be developed. ‘Likability’ and ‘familiarity’ are two key dimensions of McGuire’s (1985) source attractiveness model, and indicators for these two dimensions were developed based on definitions in his ‘source valence’ model. According to McGuire (1985), ‘familiarity’ is knowledge of the source through exposure, while ‘likability’ is the affection which the source generates in the recipient through the source’s physical appearance and behavior. Apart from McGuire’s (1985) definitions, popular Chinese media were also referenced for the terminology commonly used to describe celebrities. These led to the generation of three items for each dimension in accordance with the bipolar differential nature of the Ohanian (1990) scale:
‘familiarity’ - familiar/unfamiliar, well known/unknown, high exposure/low exposure

‘likability’ - likable/unlikable, charming/not charming, popular/unpopular

To verify and build on the findings of Ohanian’s (1990) results, the measures for ‘purchase intention’ were also adapted from Ohanian’s (1990) study. Ohanian (1990) had used three items, ‘inquire about’, ‘consider purchasing’ and ‘actually purchase’, which are commonly used in advertising research to measure the effectiveness of source credibility (Ohanian, 1990). The same dependent variables were used to measure ‘purchase intention’ by Pornpitakpan (2003b) in Singapore. In line with the objective of this study, only two variables were used so as to provide a clear distinction between cognitive (‘consider purchasing’) and behavioral (‘actually purchase’) effects. Since the word ‘actually’ contains some ambiguity in Chinese, it was replaced by ‘definitely’, which is more widely used in the measurement of purchase intention and conveys more certainty.

‘purchase intention’ – will consider purchasing

will definitely purchase

3.5.3 Measurement scale

For the sake of consistency and comparability, the same seven-point semantic differential scale as in the Ohanian (1990) study was used for this research. It is a descriptive scaling tool commonly used to measure attitudes in consumer research (Garland, 1990). The semantic differential technique is ‘flexible and easy-to-use’ and is well supported, more than others, by a fully-developed theoretical model (Kaplan, 1972, p.362). It is considered one of the best available tools for measuring
multi-component concepts (Agheyisi and Fishman, 1970). Generally treated as an interval scale (Zikmund, 2003), it is able to achieve the high level of measurement necessary for determining correlations of variables (Burns and Bush, 1995). Although there is no definitive answer for the optimal number of points to be used on a response scale, the findings of a study by Green (1988) using numerical simulation to examine information recovery have recommended the use of six or seven-point scales. Since the semantic differential scale was originally developed by Osgood, Suci and Tannenbaum (1957) as a seven-point bipolar adjectival scale and the same was used by Ohanian (1990), a seven-point response scale was considered appropriate for this study.

This section has detailed how the key constructs of the study were operationalized and the measurement tools for this research were developed. A copy of the full questionnaire in English and in Chinese is provided in Appendix 3.1 (p.169) and Appendix 3.2 (p.172) respectively. The next section describes how the questionnaire was designed.

### 3.6 Questionnaire Design

The questionnaire is probably the most important part of a research project (Spagna, 1984). Since a survey can only be as good as its questionnaire, the questionnaire design process is a key step in survey research (Zikmund, 2003). When respondents do not co-operate or if they give untruthful answers, it can lead to non-response and response errors (Hair, Bush and Ortinau, 2000). A good questionnaire can help encourage respondents to participate and provide accurate responses (Cooper and Schindler, 2001). This section describes some of the major issues considered and actions taken during the questionnaire design process: questionnaire content, question
wording, questionnaire layout and questionnaire pretest (Zikmund, 2003).

3.6.1 Questionnaire content

Development of the questionnaire content should be based on research problem definition and objectives, with a view to achieving both relevancy and accuracy (Zikmund, 2003). As the objective of this research is to identify and confirm the dimensions of source credibility and its impact on consumers’ purchase intention in Hong Kong, the content of the questionnaire was concentrated on the definition of the latent construct ‘credibility’ and the measurement of consumers’ cognitive versus behavioral intent to purchase. Since the focus is on Chinese consumers, the content was ‘localized’ through the use of two popular Hong Kong celebrities and, unlike Pornpitakpan’s (2003a) study in Singapore which was conducted in English, translated into Chinese.

To ensure relevancy and accuracy, no unnecessary information was collected and the questionnaire was designed in such a way that it would generate interest and encourage participation among respondents (Zikmund, 2003). Apart from the rating of celebrities and the measurement of purchase intent, additional questions were kept to a minimum. The simplicity of the questionnaire helps reduce the probability of biased answers (Zikmund, 2003). The questionnaire also took advantage of Hong Kong people’s interest in celebrities to increase the response rate by highlighting the research topic of celebrity advertising in bold at the very beginning. These actions were intended to increase the respondents’ willingness to cooperate and provide answers which are more accurate and reliable.
3.6.2 Question wording

Question wording is an important part of questionnaire design as only a good survey question can obtain true information from the respondents (Burns and Bush, 1995). The guiding principle for all questions was once again simplicity and brevity in order that accurate answers which genuinely reflected the respondents’ perspectives could be captured.

Scaled response questions were used to define credibility and measure purchase intention. Apart from one product-type question, all were fixed-alternative questions which are easier to answer and take less time to complete (Zikmund, 2003). Checkboxes were used to make the questionnaire appear simple and easy to complete, which should help to increase the response rate (Kinnear and Taylor, 1996).

Instead of pre-determining a list of matching products for the celebrities, asking respondents themselves to name the most appropriate product for the celebrity ensured that the matching of the celebrity and product was truly credible in the individual respondent’s mind. This approach should help to improve the accuracy of respondents’ assessment of the various dimensions of celebrity credibility. Though not a close-ended question, it was straightforward enough so that the possibility of interviewer bias was minimal. A key benefit of using respondent choice is that, like open-ended questions, it is likely to help respondents to warm up to the process (Zikmund, 2003). In this case, the product question served to generate respondents’ initial interest and set the scene for the actual survey.
The language of the questionnaire should be simple and easily understood by the target respondents (Sekaran and Bougie, 2010; Zikmund, 2003). In line with the procedures of the back-translation method recommended for cross-cultural research (Brislin, Lonner and Thorndike, 1973), the questionnaire was developed in English based on Ohanian’s (1990) study, translated into Chinese, and then back-translated into the original for cross-checking. Special steps were taken to ensure that the Chinese translation was relevant to the Hong Kong market and easily understood by local consumers. More specifically, in the absence of a known published Chinese translation of the two measurement scales, expert advice was sought to confirm the accuracy and applicability of the Chinese translation. Referencing the language used by popular local media, the questionnaire was discussed with an expert in mass communication who is the Copywriting Chief of a major local advertising agency. This led to the change of the Chinese translation from ‘actually purchase’ to ‘definitely purchase’ to remove the ambiguity of the word ‘actually’ in Chinese. The revised questionnaire and translation was then endorsed by another expert in communications who is Head of the Corporate Communications Department of a leading multinational financial institution.

3.6.3 Questionnaire layout

The layout of the questionnaire should look clean and simple and the questions should be sequenced with a view to generating respondents’ interest and increasing their participation rate (Malhotra, 1999; Zikmund, 2003). The 2-page questionnaire was neatly printed on both sides of an A4 sheet to make it appear as short as possible without looking crowded (Churchill, 1995). The name of the celebrity was printed in bold under the title of the survey at the top on the front page (Kinnear and Taylor, 1996).
to create curiosity. The questionnaire began with a short warm-up section with two filter questions to screen out those who were not eligible (Zikmund, 1997), i.e. those who were not Hong Kong residents aged 18+ and those who did not recognize the name of the celebrity being rated. The main body of the questionnaire consisted of the product question and the respective scales of measurement on the rating of the celebrity and respondents’ purchase intention. Demographic questions related to sensitive personal information such as age, education, occupation and monthly income were placed at the end to reduce the possibility of respondents’ refusal to complete the survey (Burns and Bush, 1995).

3.6.4 Questionnaire pretest

The pretest, which helps to locate and remove potential problems before the survey is conducted, is a vital step in the research process (Malhotra, 1999). Pretesting is the only method through which a researcher can ascertain whether a questionnaire causes any problems prior to its execution (Krosnick, 1999). Pretesting helps to identify questions which the respondents might have difficulty understanding or which they might interpret differently from what is originally intended (Krosnick, 1999). Since a pretest does not require a statistical sample, the questionnaire is usually tested on a small convenience sample of people with profiles similar to the target population (Zikmund, 2003). Sudman (1983) suggests that a sample of between 20-50 is enough to detect the major flaws in a questionnaire.

The questionnaire was piloted after the approval of the research by the University Ethics Committee using the conventional pretesting procedures (Presser et al, 2004). The pre-test was conducted on a weekday afternoon between 2:30 and 5 p.m. one week
before the actual survey and at the same site as the survey in order that the convenience sample of respondents could approximate those in the survey. Passers-by who appeared to be willing-to-help were approached and given a copy of the Participant Information Sheet (PIS) which explained the project and invited them to complete the questionnaire and to inform the researcher of any problems encountered in the process (unlike the PIS for the actual survey which only asked the respondents to complete the questionnaire). It also specified that the information collected would be used to improve the final design of the questionnaire survey for the actual research project (Appendix 3.3). Those who agreed to participate were each given a copy of the questionnaire on a clipboard for them to complete by themselves. They were encouraged to ask questions in case of difficulty when completing the questionnaire. Anonymity was assured by having the respondents deposit the completed questionnaires directly into the collection box in front of them.

None of the 20 respondents who took part during the 2 1/2 hour period of the pilot had any problems with the questionnaire. The respondents did not have any difficulty with the sequencing of the questions and no clarification for any part of the questionnaire was needed. From the observation of the researcher, the respondents did not express any negative feelings or hesitation in the process. Nor did they decline to answer any of the questions. The positive results of the pretest are perhaps expected as most of the items in the questionnaire have previously been tested and validated in other markets. However, three of the respondents did take slightly longer than others to name a suitable product for the male celebrity to endorse, thus lengthening the time needed to complete the questionnaire. Based on the findings of the pilot, it was decided that no modification to the survey instrument was required but that more time should be
allowed for the completion of the survey than originally planned.

In summary, this section has described the process of questionnaire design for the research. In order to obtain relevant and accurate answers from the respondents, the questionnaire had to be simple and brief, in a language which was easily understood by the target population. Respondents’ interest was generated through the use of an introductory PIS and one open-ended product question for warming up, followed by easy-to-answer fixed-alternative questions. The layout of the questionnaire was neat and tidy and deliberately made to look short. The questionnaire was pretested using the same target population as the actual survey to ensure that respondents had no problem completing the questionnaire. With the questionnaire finalized, the survey was ready to be conducted. The next section details how the survey was administered.

3.7 Survey Administration

A survey has to be administered in such a way that it not only achieves a high response rate but also reduces the possibility of non-response bias/error (Malhotra, 1999). Although the problem of non-response error is most serious in mail surveys, high refusals to participate in the research can also cause serious bias in other types of survey (Zikmund, 2003). While a well-designed questionnaire can help to increase the response rate (Zikmund, 2003), special efforts were made in the course of the research to reduce the number of refusals or non-respondents. This section provides details of how the survey was administered and the measures taken to increase the response rate and reduce non-response bias.
3.7.1 Fieldwork procedures

Fieldwork began one week after the questionnaire had been successfully piloted, achieving a total sample of 300 over a ten day period including one week-end. As noted above, the survey took place inside a covered footbridge in Hung Hom on the Kowloon side of Hong Kong for ten consecutive days between 10-12:30 a.m. and 2:30-5 p.m. From a central point of the footbridge with high pedestrian traffic, every 3rd passer-by was intercepted. Each received a copy of the PIS, which included details of the project and an invitation to participate in the survey. The first 150 respondents, irrespective of their gender, were asked to rate the male celebrity and the second 150 respondents the female celebrity. All were provided with a pen and clipboard to complete the questionnaire on the spot. To ensure anonymity, completed questionnaires were placed by the respondents directly into the collection box in front of them.

3.7.2 Response optimization

The objective here was to entice the maximum number of every 3rd passer-by selected to agree to take part in the survey. In addition to a well-designed questionnaire both in form and content, major strategies used to increase the acceptance rate were data collection time variation and trust-building:

(i) Varying data collection time for wider respondents' coverage

The survey was conducted both in the morning and in the afternoon and on different days of the week. Carrying out fieldwork in different time slots facilitated the coverage of respondents from a wider spectrum of the target population. It is assumed that reduction in refusal rate and broader respondent coverage helped in turn to increase response rate and reduce non-response error.
(ii) Establishing trust with respondents

As the first point of contact, the PIS (Appendix 3.4) was given to the respondent prior to commencing the survey to establish trust with the target respondents. A proper introduction that clearly identifies the researcher and the objective of the study is essential (Sekaran and Bougie, 2010). Since the identification of the survey with an established institution could help to legitimize the project and instill confidence, the University of Newcastle logo was printed in bold at the top of the PIS. The name of the supervisor and her address and contact information were also placed next to the logo to reinforce authority and professionalism. A good introduction can help build rapport with the respondents and motivate them to participate with greater enthusiasm. At the same time, assuring the respondents of their anonymity right at the start can lead to less biased hence more accurate answers (Sekaran and Bougie, 2010). The introductory PIS ended with a courteous thank-you to the respondents to further create goodwill. Firm assurance of respondents’ confidentiality in the PIS was likely to further help to strengthen respondents’ trust in the survey.

In brief, this section described how fieldwork was conducted to achieve a total sample of 300. It also explained the methods used to help increase the response rate and reduce non-response bias such as varying the data collection time of survey and building trust with target respondents. The next section discusses the techniques used to analyse the collected data.
3.8 Data Analysis

After the data has been collected, the two key tasks are to assess the quality of the measurement and to test the proposed hypotheses. This section summarizes the major statistical tools and procedures employed in this study.

3.8.1 Exploratory factor analysis

As a key objective of the research is to test the applicability of Ohanian’s (1990) scale in the Hong Kong market, factor analysis will be used to verify the structure of the scale. Used by both Ohanian (1990) and Pornpitakpan (2003a) in their studies of the dimensions of celebrity credibility, factor analysis is the preferred analytical technique as ‘it establishes dimensions within the data and serves as a data reduction technique’ (Stewart, 1981, p.51). It shows how the separate components distinguish from one another. In establishing dimensions, factor analytic techniques help to establish construct validity of multi-dimensional scales (Acito, Anderson and Engledow, 1980). They can also develop more reliable scales with greater clarity, thus helping to avoid the use of one-item scales to measure constructs in consumer research (Jacoby, 1978). In line with the objectives of the proposed research, factor analysis can be used in both exploratory and confirmatory situations (Acito et al., 1980).

In the first phase of data analysis, exploratory factor analysis will be used to test the validity of the existing scale and the newly-added dimensions, ‘familiarity’ and ‘likability’. Prior to conducting the analysis, the correlation matrix will be used to verify that the variables are adequately correlated. In this case, factor analysis will only be undertaken if at least one of the correlation coefficients exceeds 0.30. Further tests of the suitability of using factor analysis will be the Bartlett’s test of Sphericity.
(check that the p-value is less than 0.05) and the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy (the overall KMO statistic should be at least 0.60 and the KMO statistic for each individual variable should be greater than 0.50). Finally, the communalities for variables will be checked to ensure that they are greater than 0.30. (Hair et al., 2010).

Exploratory factor analysis will consist of factor extraction and rotation. As in the study by Ohanian (1990), principal components analysis, which is recommended for analyses of 20 or more variables, will be used to determine the underlying factors (Nunnally and Berstein, 1994). Similar to Ohanian’s (1990) study, varimax rotation, which keeps the factor axes at right angles to each other, will be used. The varimax rotation procedure is the most frequently chosen method in exploratory factor analysis (Coakes, Steed and Ong, 2010). Based on the recommendation of Hair et al. (2010), items that load at 0.30 or above will be interpreted. As these procedures are expected to confirm the structure of the Ohanian scale, all items/original variables for ‘trustworthiness’, ‘expertise’ and ‘attractiveness’ should have Eigenvalues greater than 1 and factor loadings of over 0.30 (Hair et al., 2010). Any items for the newly added dimensions, ‘familiarity’ and ‘likability’, which do not meet the requirements plus any items with high ‘cross-loading’ will have to be deleted.

3.8.2 Confirmatory factor analysis

Confirmatory factor analysis will be preceded by reliability testing to further refine the scale. Cronbach’s alpha will be used to determine internal reliability, i.e. that the items in the scale are consistent, and, if necessary, to further fine-tune the scale. Once the items in each dimension are established via exploratory factor analysis, confirmatory
factory analysis through AMOS will be used to rigorously demonstrate construct (discriminant) validity. AMOS, instead of the LISREL program used by Ohanian (1990) and Pornpitakpan (2003a), will be used for confirmatory factor analysis. Part of the SPSS software package, AMOS’ simple user interface has become increasingly popular (Hox, 1995). In addition to important outputs such as normality and the modification index, the goodness of fit indices will confirm whether the measurement models for the celebrities fit the data well. High model fit indices will confirm that the dimensions/factors of the celebrity endorsers’ credibility scale are applicable in the Hong Kong market.

**3.8.3 Multiple regression**

The final phase of data analysis is to determine the impact of ‘trustworthiness’, ‘expertise’, ‘attractiveness’, ‘familiarity’ and ‘likability’ on purchase intention through multiple regression analyses. Multiple regression analysis is often used to investigate the relationship between a single dependent variable and several independent variables (Hair et al., 2010). It is deemed appropriate for testing hypotheses if the proposed relationships are not complicated and can be tested one at a time (Hair et al., 2010). An aggregate variable for each dimension will be calculated by using the average of the items constituting the dimension.

Separate analyses will be done to ascertain the influence of the five independent variables (IVs) on (1) ‘consider purchase’ and (2) ‘definitely purchase’ as dependent variables (DVs). The resultant R Square statistic will demonstrate the variance explained by the five IVs on each of the DVs and the level of significance will be indicated by the F-value. An examination of the t-values will confirm whether
individual variables contribute to the prediction of ‘consider purchase’ and ‘definitely purchase’. Prior to conducting the regression analyses, the skewness and kurtosis values of the DVs will be checked to ensure normal distributions and suitability for multivariate analysis.

In short, this section described the analytical tools and statistical methods which will be applied in this research. Exploratory factor analyses will be used to test the validity of the five dimensions of source credibility. Cronbach’s alpha will be used to check the internal consistency. After the items have been established, confirmatory factor analysis will be used to demonstrate construct validity. Finally, multiple regression analyses will determine the impact of the five credibility dimensions on the two purchase intent indicators. The final section deals with ethical issues in research.

3.9 Ethical Considerations

Ethics in research refer to the actions undertaken by the researcher to ensure that ethical decisions are made in the research process (Hair et al. 2000). Special consideration was given to ethical issues in all stages of this research project, from planning and execution to data analysis and the reporting of findings. Approval from the University Ethics Committee was obtained prior to the commencement of fieldwork and the requirements were strictly followed to ensure that the research was conducted in an ethical and safe manner (a copy of the approval notification from the University of Newcastle’s Human Research Ethics Committee is in Appendix 3.5).

Ethical treatment of respondents was considered a top priority for this research. To guarantee safety of the respondents, the survey was conducted in a covered area free
from traffic. The rights of the respondent were safeguarded with particular attention paid to the three major areas: privacy, deception and the right to be informed (Zikmund, 2003). Participation in the research was on a completely voluntary basis and respondents were assured of their anonymity with no identification required. The objective and details of the research, including what the respondents had to do and the potential risks and benefits, were all truthfully spelled out in the PIS. The contacts of both the researcher and the supervisor were stated clearly. Respondents who are interested in the results of the research are to be provided access to a copy of the report summary. Confidentiality is further guaranteed by the fact that the data collected will be securely stored and eventually destroyed.

In short, great care was taken to ensure that high ethical standards were maintained in all stages and aspects of the research.

3.10 Conclusion to Chapter Three
This chapter has described the research methodology used in this study. The advantages and disadvantages of different data collection methods were discussed and the choice of an interviewer-administered self-completion questionnaire survey was justified. Non-probability convenience sampling through street intercepts was proposed at the end of a discussion on the different stages of the sampling process. Details on how the key constructs were operationalized and the scales of measurement were developed were then provided. The ensuing section, elaborating on the main stages of questionnaire development including questionnaire pretest, emphasized the importance of a well-designed questionnaire to the relevancy and accuracy of research findings. Survey procedures and the methods used to increase the response rate were
explained. The use of exploratory and confirmatory factor analyses and multiple regression analyses to analyse the data was justified. The chapter ends with a summary of the key ethical issues and an assurance of high ethical standards throughout the research project.
CHAPTER FOUR

DATA ANALYSIS

4.1 Introduction

The previous chapter described and justified the research methodology selected for this study. Chapter 4 begins with a preliminary examination of the data by explaining the data preparation strategies and steps taken to ensure the accuracy of the data. It then details the procedures of data analysis and reports the findings.

This chapter consists of seven sections. After the introduction in Section 4.1, data examining and screening procedures are detailed in Section 4.2 together with an analysis of the response rate. This is followed by descriptive statistics in Section 4.3. Section 4.4 reports on the reliability testing and item analysis, followed by exploratory factor analysis. Having confirmed the five-factor solution, Section 4.5 details the results of assumption testing with the aggregated values of the five constructs. Section 4.6 reports on the confirmatory factor analysis for the proposed measurement model developed from the results of the exploratory factor analysis. The next section presents the results of multiple regression analyses used to test the hypotheses for purchase intention (Section 4.7) and the chapter concludes with a summary of the hypotheses and findings (Section 4.8).

4.1 Data Preparation & Examination

Before conducting any multivariate analysis, the collected data should be edited, coded and inputted correctly in a format which facilitates analysis (Zikmund, 1997). This section begins with a discussion of the survey’s response rate, followed by details of
data preparation including editing, coding, data entry as well as tests for missing data
and outliers.

4.2.1 Response rate

When conducting the survey, passers-by were stopped and invited to participate in the
survey until the required number of respondents was reached. To achieve the sample
of 300, a total of 390 passers-by had been approached, representing a very high
response rate of 83%. This response rate is close to the nonresponse rate of 10%
reported in Nowell and Stanley’s (1991) mall intercept study on length-biased sampling.
Their study concludes that intercept surveys which are brief and can be easily
completed by participants or those lasting five minutes or less can achieve a
nonresponse rate of less than 10%. However, more recent survey literature has shown
that the average response rate for full-length intercept surveys rarely exceeds 50%
(Denstadli, 2000). The high response rate for this study was possibly due to the
brevity of the questionnaire and its interesting topic as well as Hong Kong people’s
fascination with celebrities.

4.2.2 Data cleaning and screening

Data editing, coding, entry and verification are the key steps which help to ensure that
the data are complete, consistent and usable (Zikmund, 1997). Prior to editing the data,
returned questionnaires were first examined to determine their acceptability for this
study. Almost all the returned questionnaires were of a very high standard. Of the
three hundred returned questionnaires, only two had been completed in a slip-shod
manner with omissions and misplaced checks which made it hard to determine the exact
answers of the respondents. These two questionnaires, which were both from the male
celebrity sample, were considered unacceptable and excluded from the analysis.

The remaining 298 questionnaires were further checked for errors or omissions during data entry (Cooper and Schindler, 2001). Perhaps due to the brevity of the questionnaire, which required less than five minutes to complete, and the presence of the researcher to provide explanation where necessary, none of the accepted questionnaires had any omissions. In two of the questionnaires from the male sample, respondents had suggested real estate as the endorsed product. Since real estate is not a frequently purchased consumer product and involves a more complex decision-making process, these two questionnaires were also considered not suitable for the analysis and therefore rejected.

Once editing was completed, the qualified questionnaires (a total of 296) were coded and entered into a format that allowed the raw data to be analyzed. To facilitate the application of multivariate analysis, a variable for ‘product category’ was created during the coding process for the only open-ended question in the survey. All the proposed products were grouped under ten categories, those with less than three mentions being categorized as ‘miscellaneous’. In addition, although the boxes in the semantic differential scales for credibility and purchase intention were not numbered in the questionnaire, numbers were added during the coding process, with a score of 1 indicating the highest positive ranking (eg. 1= the most attractive to 7 = the most unattractive) and the mid-point 4 representing ‘neither attractive nor unattractive’. This numbering is consistent with the bipolar options, in which the positive attribute was placed on the left of the questionnaire and the negative attribute on the right. After the coding and inputting process was completed, every tenth record was checked.
for accuracy against the original questionnaire and the identified errors corrected.

4.2.3 Missing data and outliers

Since missing responses could affect the generalizability of the data and lead to biased results (Hair et al., 2010), a check for missing data was performed. The origin of missing data could be the respondents or other sources in the research process (Hair et al., 2010). In this study, the missing data were all related to Q5(i) and Q5(ii) on self purchase, which were skipped by 16 respondents who presumably did not consider the proposed product to be appropriate for self-use (e.g., cosmetics for a male respondent).

To avoid the problem of missing data in the subsequent use of structural equation modeling, a new value label ‘8’ representing ‘not applicable’ was created for Q.5 (i) and Q5 (ii) to fill in the blanks.

The next step was to detect and assess outliers. Outliers are observations which differ significantly from others and outliers can also lead to biased results (Hair et al., 2010). They can be detected through a variety of methods such as the boxplot and the standard score. Based on the suggestion of Hair et al. (2010), the standard score was used to identify the outliers in this study because it is easier and simpler to use than other methods such as the boxplot or scatterplot. The threshold value of the standard score was set at a maximum of 4 as recommended by Hair et al. (2010) for samples larger than 80. The results of the analysis showed that only one case in the female celebrity sample had high scores of above 4 across 7 variables, with an above 5 rating on two of them. Since this was an exceptional case representing one respondent who was very different from the rest of the population, it was removed from the sample.
The final sample size for this study after data cleaning and screening was 295 - 146 for the male celebrity and 149 for the female celebrity. This meets the minimum requirement of five cases per variable for factor analysis and for multiple regression analysis as recommended by Hair et al. (2010).

The section above described how the data was prepared for the effective application of multivariate analysis by careful editing and screening, checking for missing data and testing for outliers. The next section presents the key statistics on the profile and respondents’ ratings of the celebrities.

4.3 Descriptive Statistics

Hair et al. (2010) recommend familiarizing with the data in order to have a preliminary understanding of the relationships among variables prior to actual analysis. In this section, a profile of the respondents is provided through a summary of the sample’s demographics. An examination of the credibility indicator variables and purchase intention variables will further shed light on the respondents’ ratings of the celebrities.

4.3.1 Profile of respondents

Table 4.1 presents a summary of the respondents’ characteristics. It is assumed that since female passers-by tend to have more leisure time and are more interested in taking part in surveys, a high majority of the respondents were female (69.5%). More than half of the respondents were in the 26-39 age category, the largest group being between 26-29 years (37%), followed by those aged between 30-39 (27%). There was a rather balanced mix of respondents in terms of education level - 47% with a secondary education or below and 53% with a tertiary or above education. Half of the
respondents were clerical and service workers. Students were the second largest group (15.9%), followed closely by professionals (11.2%) and managers and executives (8.5%). A large majority (43.1%) of the respondents earned between $10,001 and $20,000 per month. About 20% of the respondents had monthly income of $10,000 or lower. The higher income groups - those earning between $20,001-$40,000 (12.5%) and above $40,000 (8.1%) - represented another 20%.

Although the sample achieved through non-probability sampling was not representative of the Hong Kong population, it was considered appropriate for the purpose of this study. Compared to Hong Kong’s population statistics, the profile of the respondents is more upscale than the average population. According to the Hong Kong Government’s 2009 census statistics, the median monthly domestic household income was then HK$17,500 and only 22.8% of the population had a post-secondary education. The split between male and female was 47.1% and 52.9%. Compared to Hong Kong’s population statistics, the sample was skewed towards the female population, was more educated and therefore more affluent. However, this more upscale profile is likely more suitable for consumer surveys, particularly surveys which involve the testing of concepts such as celebrity credibility.
Table 4.1 Profile of respondents (n=295)

<table>
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<tr>
<th>Characteristics</th>
<th>Number</th>
<th>Percentage</th>
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</tr>
<tr>
<td>Managers &amp; executives</td>
<td>25</td>
<td>8.5</td>
</tr>
<tr>
<td>Professionals</td>
<td>33</td>
<td>11.2</td>
</tr>
<tr>
<td>Students</td>
<td>47</td>
<td>15.9</td>
</tr>
<tr>
<td>Homemakers</td>
<td>17</td>
<td>5.8</td>
</tr>
<tr>
<td>Others</td>
<td>25</td>
<td>8.5</td>
</tr>
<tr>
<td><strong>Monthly personal income</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>$10,000 or below</td>
<td>58</td>
<td>19.7</td>
</tr>
<tr>
<td>$10,001-$20,000</td>
<td>127</td>
<td>43.1</td>
</tr>
<tr>
<td>$20,001-$40,000</td>
<td>37</td>
<td>12.5</td>
</tr>
<tr>
<td>Above $40,000</td>
<td>24</td>
<td>8.1</td>
</tr>
<tr>
<td>Not applicable</td>
<td>49</td>
<td>16.6</td>
</tr>
</tbody>
</table>

4.3.2 Overview of respondents’ ratings on celebrities

An analysis of the means and standard deviations of the credibility indicator variables (independent variables) and purchase intention variables (dependent variables) provided a preliminary understanding of the respondents’ views of the celebrities selected for the study. As mentioned in the previous chapter, the items were rated on a seven-point semantic differential/behavioral intention scale following the procedures of Ohanian
and numbered from left to right for coding purposes.

Table 4.2 Means and standard deviations of respondents’ ratings on the credibility indicator variables

<table>
<thead>
<tr>
<th>Indicator/Question Variables</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Attractiveness</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Attractive/unattractive</td>
<td>2.57</td>
<td>0.75</td>
</tr>
<tr>
<td>Classy/not classy</td>
<td>2.62</td>
<td>0.81</td>
</tr>
<tr>
<td>Handsome/not handsome</td>
<td>2.68</td>
<td>0.90</td>
</tr>
<tr>
<td>Elegant/plain</td>
<td>2.72</td>
<td>0.95</td>
</tr>
<tr>
<td>Sexy/not sexy</td>
<td>2.84</td>
<td>0.99</td>
</tr>
<tr>
<td><strong>Trustworthiness</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dependable/undependable</td>
<td>2.64</td>
<td>0.85</td>
</tr>
<tr>
<td>Honest/dishonest</td>
<td>2.46</td>
<td>0.84</td>
</tr>
<tr>
<td>Reliable/unreliable</td>
<td>2.48</td>
<td>0.93</td>
</tr>
<tr>
<td>Sincere/insincere</td>
<td>2.56</td>
<td>0.88</td>
</tr>
<tr>
<td>Trustworthy/untrustworthy</td>
<td>2.59</td>
<td>0.89</td>
</tr>
<tr>
<td><strong>Expertise</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Expert/not an expert</td>
<td>2.45</td>
<td>0.96</td>
</tr>
<tr>
<td>Experienced/not experienced</td>
<td>2.22</td>
<td>0.95</td>
</tr>
<tr>
<td>Knowledgeable/unknowledgeable</td>
<td>2.44</td>
<td>0.93</td>
</tr>
<tr>
<td>Qualified/unqualified</td>
<td>2.36</td>
<td>0.91</td>
</tr>
<tr>
<td>Skilled/unskilled</td>
<td>2.49</td>
<td>0.91</td>
</tr>
<tr>
<td><strong>Familiarity</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Familiar/unfamiliar</td>
<td>2.01</td>
<td>0.62</td>
</tr>
<tr>
<td>Well known/unknown</td>
<td>1.82</td>
<td>0.62</td>
</tr>
<tr>
<td>High exposure/low exposure</td>
<td>1.88</td>
<td>0.77</td>
</tr>
<tr>
<td><strong>Likability</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Likable/unlikable</td>
<td>2.13</td>
<td>0.70</td>
</tr>
<tr>
<td>Charming/not charming</td>
<td>2.07</td>
<td>0.77</td>
</tr>
<tr>
<td>Popular/unpopular</td>
<td>2.02</td>
<td>0.73</td>
</tr>
</tbody>
</table>

All data measured on 7-point scales, lower ratings are more positive

For the indicators of credibility (attractiveness, trustworthiness and expertise), all the means were between 2 and 3 (out of a possible 7), except for ‘well known’ and ‘high exposure’.
exposure’ which had even lower means of 1.82 and 1.88 respectively. This shows that the celebrities were rated very positively on all the attributes which define celebrity credibility. The low standard deviations of all the variables, ranging between 0.60 and 0.90, also reflected the relatively small variation in respondents’ ratings. It is worth noting that the indicators which define the newly added dimensions, ‘familiarity’ and ‘likability’, had the lowest means of all indicators, ranging between 1.82 and 2.07. Because ‘1’ represented the most positive response (shown on left of scale), their low scores provided initial support for the likely importance of ‘familiarity’ and ‘likability’ in defining celebrity credibility.

Table 4.3 Means and standard deviations of respondents’ ratings on purchase intention variables

<table>
<thead>
<tr>
<th>Question Variables</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Self Purchase</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Will consider/will not consider</td>
<td>3.11</td>
<td>1.43</td>
</tr>
<tr>
<td>Will definitely/definitely not</td>
<td>3.64</td>
<td>1.39</td>
</tr>
<tr>
<td><strong>Gift-giving</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Will consider/will not consider</td>
<td>3.25</td>
<td>0.90</td>
</tr>
<tr>
<td>Will definitely/definitely not</td>
<td>3.59</td>
<td>0.87</td>
</tr>
</tbody>
</table>

All data measured on 7-point scales, lower ratings are more positive

Table 4.3 shows that with respect to the purchase intention variables, the mean scores were all around 3, ranging between 3.11 and 3.64. This means that respondents’ intention to purchase were about neutral and not strong. However, the standard deviations for the ‘self purchase’ variables were higher than for ‘gift giving’ (about 1.4 for the former and around 0.90 for the latter). This shows that the opinions of the
respondents were more divided in a self-purchase situation than gift-giving. When the endorsed product is meant for self-use, a stronger reaction, both favorable and not favorable, was registered by the respondents.

In brief, the above statistics seem to indicate a general agreement among the respondents, as reflected by the relatively small variation in the ratings. The two newly added dimensions, ‘familiarity’ and ‘likability’, were found to receive slightly more positive ratings than ‘attractiveness’, ‘trustworthiness’ and ‘expertise’. A preliminary understanding of the results paved the way for multivariate analyses to confirm the structure of the credibility scale. The following section reports on the first of such undertakings to validate the scale through factor analysis.

4.4 Scale Refinement - Exploratory Factor Analysis

The adoption of Ohanian’s (1990) credibility scale and the addition of new sub-scales for ‘familiarity’ and ‘likability’ derived from multiple sources in the literature necessitated further testing to determine the summated scale’s ability to measure the credibility construct. After confirming the suitability of the data for factoring, exploratory factor analysis with all 21 items was conducted to assess the validity of the scale. This was followed by reliability testing using Cronbach’s alpha to determine the internal consistency of the items constituting each factor.

4.4.1 Assessment of suitability for factor analysis

Prior to conducting factor analysis, there was a need to confirm that the items were sufficiently correlated and that the data were suitable for factoring (Hair et al, 2010). An examination of the correlations between the variables confirmed that the data matrix
of both the male and female celebrity samples have sufficient correlations for the application of factor analysis. All items/indicators were strongly related with at least one other indicator, and in most cases with several others, with correlation coefficients which were greater than 0.30. Since both sets of data had a large number of correlation coefficients greater than 0.30, they were considered appropriate for factoring (Hair et al., 2010).

Further support for the use of factor analysis was found in the Bartlett’s test of sphericity, which was statistically significant in both sets of data. This means that the magnitude of the correlations of the entire correlation matrix was appropriate for factor analysis (Hair et al., 2010). The Bartlett’s test of sphericity for the correlation matrix of the male celebrity data was chi-square = 2654.04 with degrees of freedom (df) = 210 and a significance level of p = 0.00. For the female celebrity data, the chi-square was 1613.85, with a df of 210 and a significance level of p = 0.00. These results indicated strong correlations among the item variables defining the credibility construct.

The final proof for the strength of the relationships among the variables was provided by the Kaiser-Meyer-Olkin (KMO) statistic. The KMO value of the male celebrity data was 0.93 while that of the female celebrity data was 0.82. KMO values of above 0.60 indicate a statistically significant relationship among the variables, which are deemed suitable for the application of exploratory factor analysis (Tabachnick and Fidell, 1996). The high KMO statistics, the significance of the Bartlett’s test and the large number of high correlation coefficients all showed that the two sets of data were adequately correlated to justify the application of factor analysis.
4.4.2 Exploratory factor analysis

As noted above, the scale consisted of Ohanian’s (1990) 3-factor model and the additional factors ‘familiarity’ and ‘likability’ developed from the literature review and other secondary literature. This means that there were altogether 21 item variables for the five constructs, five each for ‘attractiveness’, ‘trustworthiness’ and ‘expertise’ and three each for ‘familiarity’ and ‘likability’. The 21 indicators were expected to load on their respective factor. Consistent with Ohanian (1990), separate analyses were performed for the female and male celebrities to identify potential differences between the two.

Principal components analysis (PCA) was conducted to generate initial solutions, followed by varimax rotation to make the factors more meaningful and easily comprehensible. The PCA identifies the underlying dimensional structures and reduces the variables into a smaller number of components (Cooper and Schindler, 2001). The varimax orthogonal rotation technique was chosen over oblique rotation as orthogonal rotation techniques are the most widely used rotation techniques (Hair et al., 2010). To determine the number of factors to extract, the latent root criterion, the percentage of variance criterion and the scree plot analysis were used. The latent root criterion can yield reliable results for studies with indicators of between 20 and 50 (Hair et al., 2010), as is the case in this study. Factors having eigenvalues greater than 1 are generally considered significant and suitable for retention (Hair et al., 2010). For the percentage of variance criterion, a solution that accounts for 60% or more of the cumulative total variance is considered satisfactory (Hair et al., 2010). The scree plot is inspected visually to determine where the change in gradient occurs.
4.4.2 (i) **Female celebrity**

In line with the expanded credibility scale proposed in this study, the initial factor solution for the sample evaluating the female celebrity resulted in five factors or components with eigenvalues greater than 1. All variables had high communalities which ranged between 0.47 and 0.82, close to or well above the 0.50 level required to confirm that the variables were adequately accounted for by the factor solution (Hair et al., 2010). The first five factors accounted for 66.5% of the variance and hence this analysis was considered satisfactory. The scree plot criterion also supported the five-factor solution. Table 4.4 shows the factors and the percentage of variance explained and the cumulative percentages. It is worth noting in Table 4.4 that two major factors accounted for close to half (47.5%) of the total variance.

The five-factor structure was further confirmed by the varimax rotated factor solution. For interpretative purposes, factor loadings of 0.30 or higher are considered significant (Hair et al., 2010). All the items had high factor loadings ranging between 0.60 and 0.88, which confirmed their explanatory power for the credibility construct. As with the Ohanian scale, the items ‘reliable’, ‘honest’, ‘sincere’, ‘trustworthy’ and ‘dependable’ defining ‘trustworthiness’ were grouped under Factor 2, all with factor loadings of above or close to 0.70. Similarly, the items ‘elegant’, ‘sexy’, ‘classy’, ‘handsome/beautiful’ and ‘attractive’ were grouped under Factor 3, with factor loadings ranging between 0.60 and 0.81. The five indicators for ‘expertise’, however, were split into two factors with the knowledge-based attributes ‘skilled’, ‘qualified’ and ‘knowledgeable’ grouped under Factor 4 and the ‘time-based’ attributes ‘experienced’ and ‘expertise’ under Factor 5. On the other hand, all the six indicators for ‘familiarity’ and ‘likability’ were grouped under Factor 1, which served to highlight the
Table 4.4 Factor loading matrix for celebrity (female) credibility and total variance explained by extracted factors

<table>
<thead>
<tr>
<th>Items</th>
<th>Factor 1</th>
<th>Factor 2</th>
<th>Factor 3</th>
<th>Factor 4</th>
<th>Factor 5</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Familiarity/Likability</td>
<td>Trustworthiness</td>
<td>Attractiveness</td>
<td>Skills/Expertise</td>
<td>Experience/Expertise</td>
</tr>
<tr>
<td>familiar</td>
<td>.75</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>well known</td>
<td>.80</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>hi-exposure</td>
<td>.77</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>likable</td>
<td>.88</td>
<td></td>
<td></td>
<td></td>
<td>.36</td>
</tr>
<tr>
<td>charming</td>
<td>.78</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>popular</td>
<td>.87</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>dependable</td>
<td></td>
<td>.68</td>
<td>.45</td>
<td></td>
<td></td>
</tr>
<tr>
<td>honest</td>
<td></td>
<td>.76</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>reliable</td>
<td></td>
<td>.79</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>sincere</td>
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<td>.74</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>trustworthy</td>
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<td></td>
</tr>
<tr>
<td>attractive</td>
<td></td>
<td></td>
<td>.60</td>
<td>.60</td>
<td>.68</td>
</tr>
<tr>
<td>classy</td>
<td></td>
<td></td>
<td>.72</td>
<td>.72</td>
<td>.81</td>
</tr>
<tr>
<td>beautiful</td>
<td></td>
<td>.35</td>
<td>.67</td>
<td>.67</td>
<td>.77</td>
</tr>
<tr>
<td>elegant</td>
<td></td>
<td></td>
<td>.81</td>
<td>.81</td>
<td>.71</td>
</tr>
<tr>
<td>sexy</td>
<td></td>
<td></td>
<td></td>
<td>.77</td>
<td></td>
</tr>
<tr>
<td>qualified</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.77</td>
</tr>
<tr>
<td>skilled</td>
<td></td>
<td></td>
<td></td>
<td>.80</td>
<td></td>
</tr>
<tr>
<td>knowledgeable</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.71</td>
</tr>
<tr>
<td>expert</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>experienced</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.68</td>
</tr>
<tr>
<td>Eigenvalue</td>
<td>6.0</td>
<td>4.0</td>
<td>1.6</td>
<td>1.3</td>
<td>1.0</td>
</tr>
<tr>
<td>% of variance explained</td>
<td>28.5</td>
<td>19.1</td>
<td>7.7</td>
<td>6.2</td>
<td>5.0</td>
</tr>
<tr>
<td>Cumulative %</td>
<td>28.5</td>
<td>47.6</td>
<td>55.3</td>
<td>61.5</td>
<td>66.5</td>
</tr>
</tbody>
</table>

Note: all loadings less than 0.3 have been excluded from the table
inextricable relationship between ‘familiarity’ and ‘likability’. Two variables, ‘charming’ and ‘beautiful’, had a significant but still acceptable cross-loading of about 0.35-0.36 on ‘experience/expert’ and ‘trustworthiness’ respectively. These were retained due to their fairly large difference to other loading. The slightly problematic cross-loading was the item ‘dependable’, which had a cross-loading of 0.45 onto the ‘attractiveness’ factor. Since the meaning of ‘dependable’ is closely related to ‘trustworthiness’, this was retained based on face validity.

4.4.2 (ii) Male Celebrity

The data from the male celebrity sample were subject to the same analyses using identical statistical benchmarks as the female celebrity. Since a five-factor solution had already been confirmed by the female celebrity data, the latent root criterion was changed to the a priori criterion. This approach is commonly used when testing a theory or hypothesis about the number of factors to be extracted or when replicating other researchers’ work (Hair et al., 2010). Instead of selecting only factors with eigenvalues of 1 or above, the number of factors to be extracted was set at five. This was justified by the scree plot and the fact that three of the factors had eigenvalues of above 1, with the other two at about 0.90.

All the items demonstrated very high communalities which range between 0.64 and 0.85, thus confirming once again that the variables in this factor solution have strong explanatory power. As shown in Table 4.5, the five factors together accounted for a high percentage (78.8%) of the variance, with one dominant factor responsible for over half (53.4%) of the variance.
Table 4.5 Factor loading matrix for celebrity (male) credibility and total variance explained by extracted factors

<table>
<thead>
<tr>
<th>Items</th>
<th>Factor 1</th>
<th>Factor 2</th>
<th>Factor 3</th>
<th>Factor 4</th>
<th>Factor 5</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Trustworthiness</td>
<td>Attractiveness</td>
<td>Expertise</td>
<td>Familiarity</td>
<td>Likability</td>
</tr>
<tr>
<td>dependable</td>
<td>.80</td>
<td>.77</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>honest</td>
<td></td>
<td></td>
<td>.33</td>
<td></td>
<td></td>
</tr>
<tr>
<td>reliable</td>
<td>.71</td>
<td></td>
<td></td>
<td>.38</td>
<td></td>
</tr>
<tr>
<td>sincere</td>
<td>.78</td>
<td>.32</td>
<td></td>
<td>.32</td>
<td></td>
</tr>
<tr>
<td>trustworthy</td>
<td>.80</td>
<td></td>
<td>.30</td>
<td></td>
<td></td>
</tr>
<tr>
<td>attractive</td>
<td>.32</td>
<td></td>
<td></td>
<td>.78</td>
<td></td>
</tr>
<tr>
<td>classy</td>
<td>.32</td>
<td></td>
<td></td>
<td>.73</td>
<td></td>
</tr>
<tr>
<td>handsome</td>
<td>.35</td>
<td></td>
<td></td>
<td>.81</td>
<td></td>
</tr>
<tr>
<td>elegant</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.68</td>
</tr>
<tr>
<td>sexy</td>
<td></td>
<td></td>
<td></td>
<td>.80</td>
<td>.30</td>
</tr>
<tr>
<td>expert</td>
<td>.33</td>
<td>.33</td>
<td></td>
<td>.68</td>
<td>.40</td>
</tr>
<tr>
<td>experienced</td>
<td></td>
<td></td>
<td></td>
<td>.73</td>
<td></td>
</tr>
<tr>
<td>knowledgeable</td>
<td>.38</td>
<td>.33</td>
<td></td>
<td>.77</td>
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</tr>
<tr>
<td>qualified</td>
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<td>.77</td>
<td></td>
</tr>
<tr>
<td>skilled</td>
<td>.34</td>
<td></td>
<td></td>
<td>.80</td>
<td></td>
</tr>
<tr>
<td>familiar</td>
<td></td>
<td></td>
<td>.81</td>
<td></td>
<td></td>
</tr>
<tr>
<td>well known</td>
<td></td>
<td></td>
<td>.81</td>
<td></td>
<td></td>
</tr>
<tr>
<td>hi exposure</td>
<td></td>
<td></td>
<td>.67</td>
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</tr>
<tr>
<td>likable</td>
<td></td>
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<td>.78</td>
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</tr>
<tr>
<td>charming</td>
<td></td>
<td></td>
<td>.31</td>
<td></td>
<td></td>
</tr>
<tr>
<td>popular</td>
<td></td>
<td></td>
<td>.84</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>.70</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Eigenvalue</td>
<td>11.2</td>
<td>2.0</td>
<td>1.45</td>
<td>1.0</td>
<td>0.9</td>
</tr>
<tr>
<td>% of variance explained</td>
<td>53.4</td>
<td>9.6</td>
<td>6.9</td>
<td>4.6</td>
<td>4.1</td>
</tr>
<tr>
<td>Cumulative %</td>
<td>53.4</td>
<td>63.0</td>
<td>69.9</td>
<td>74.5</td>
<td>78.6</td>
</tr>
</tbody>
</table>

Note: all loadings less than 0.3 have been excluded from the table
Results of the varimax rotation analysis in Table 4.5 above show that the five factors and their component items were identical to those in the expanded scale proposed in this study. Although all the items had cross-loadings on other items, most of them were below 0.30 and considerably different from the highest loading. The exceptions were ‘dependable’, ‘attractive’, ‘classy’, ‘elegant’, ‘skilled’, ‘qualified’, ‘knowledgeable’, ‘experienced’ and ‘expert’, which had relatively high but acceptable cross-loadings of between 0.30 and 0.40. On the other hand, the proposed items for ‘trustworthiness’, ‘attractiveness’, ‘expertise’, ‘familiarity’ and ‘likability’ were clearly distinguished from the others, with high factor loadings in the 0.70 and 0.80 range grouped under the five respective factors. Despite minor cross-loading problems, the rotated factor solution of the male celebrity data confirmed the factor structure of the proposed credibility scale.

To summarize, the results of the exploratory factor analysis supported a five-factor solution for both the female and male celebrity. As hypothesized, the indicators for ‘attractiveness’, ‘trustworthiness’, ‘expertise’, ‘familiarity’ and ‘likability’ loaded on to their respective factor in the case of the male celebrity. The female celebrity differed in that the indicators for ‘familiarity’ and ‘likability’ were loaded together onto one factor, while the indicators for ‘expertise’ were loaded onto two related factors - ‘skills’ and ‘experience’.

In order to maintain face validity and facilitate comparisons, it was decided that the originally proposed five factors and factor structure confirmed for the male celebrity were to be used in all subsequent analyses. However, caution would be exercised in the interpretation of the data, where appropriate, regarding the female celebrity.
4.4.3 Reliability testing

To assess the reliability of the expanded credibility scale, the Cronbach’s alpha was used to test all the items based on the proposed factor structure for both celebrities. The Cronbach’s alpha, which is the reliability coefficient that assesses the consistency of a scale, is the most widely used measure of internal consistency (Hair et al., 2010). It measures the internal consistency of multiple items by representing the average correlation between the items. Tests that demonstrate high reliability produce high Cronbach’s alpha values, with 0.70 as the accepted lower limit (Hair et al., 2010).

The results of the reliability tests with both the female and male celebrity data showed that the five scales were all reliable. As can be seen in Table 4.6 below, the reliability estimates of all the scales range mostly between 0.80 and 0.90, with only the ‘expertise’ subscale for the female celebrity at just under 0.80 (0.76). These estimates reflect the relatively high reliability of the scales (Nunally and Bernstein, 1994).

In summary, this section has described the procedures and results of the exploratory factor analysis used to confirm the structure of the proposed five-factor celebrity credibility scale developed for this study based on Ohanian (1990). Tests were conducted to confirm the suitability of the data for factoring prior to the analysis. The results of the factor analysis supported the proposed 5-factor structure but noticeable differences were found in the factor matrix of the female versus the male sample. In particular, familiarity and likability were not distinguished for the female celebrity and two major factors underlying credibility were identified. However, since the factor structure of the originally proposed scale was confirmed by the male celebrity data, it was decided that this should be used for both celebrities in subsequent analyses to
maintain face validity and facilitate comparisons. The high reliability of the proposed scale was confirmed by a testing of the internal consistency of its five subscales through the Cronbach’s alpha. The next section describes the assumption-testing for the aggregated values of the major constructs based on the five-factor scale.

Table 4.6 Summary of rotated factor loadings and Cronbach’s Alpha reliability co-efficients for individual scales by female* and male celebrity

<table>
<thead>
<tr>
<th>Factor</th>
<th>Item</th>
<th>Female</th>
<th>Male</th>
<th>Female</th>
<th>Male</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Celeb</td>
<td>Celeb</td>
<td>Celeb</td>
<td>Celeb</td>
</tr>
<tr>
<td>Attractiveness</td>
<td>attractive</td>
<td>.60</td>
<td>.78</td>
<td>.81</td>
<td>.91</td>
</tr>
<tr>
<td></td>
<td>classy</td>
<td>.72</td>
<td>.73</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>handsome</td>
<td>.67</td>
<td>.81</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>elegant</td>
<td>.81</td>
<td>.68</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>sexy</td>
<td>.77</td>
<td>.80</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trustworthiness</td>
<td>dependable</td>
<td>.68</td>
<td>.79</td>
<td>.86</td>
<td>.94</td>
</tr>
<tr>
<td></td>
<td>honest</td>
<td>.76</td>
<td>.77</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>reliable</td>
<td>.79</td>
<td>.71</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>sincere</td>
<td>.74</td>
<td>.78</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>trustworthy</td>
<td>.71</td>
<td>.80</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Expertise</td>
<td>expert</td>
<td>.68</td>
<td>.68</td>
<td>.76</td>
<td>.94</td>
</tr>
<tr>
<td></td>
<td>experienced</td>
<td>.81</td>
<td>.73</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>knowledgeable</td>
<td>.71</td>
<td>.77</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>qualified</td>
<td>.77</td>
<td>.77</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>skilled</td>
<td>.80</td>
<td>.80</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Familiarity</td>
<td>familiar</td>
<td>.75</td>
<td>.81</td>
<td>.81</td>
<td>.79</td>
</tr>
<tr>
<td></td>
<td>well known</td>
<td>.80</td>
<td>.81</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>high exposure</td>
<td>.77</td>
<td>.67</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Likability</td>
<td>likable</td>
<td>.88</td>
<td>.78</td>
<td>.92</td>
<td>.85</td>
</tr>
<tr>
<td></td>
<td>charming</td>
<td>.78</td>
<td>.84</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>popular</td>
<td>.87</td>
<td>.70</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Based on originally proposed scale
4.5 Testing Aggregated Values of Major Constructs for Normality, Intercorrelations and Multicollinearity

Prior to conducting confirmatory factor analysis and multiple regression analysis with the data, the aggregated values for the five constructs were tested to ensure that key statistical assumptions were met. This section reports on the tests used to determine normality and the correlations between the dependent and independent variables. It also provides an assessment of multicollinearity based on the variance inflation factor.

Firstly, normality of the data was examined in order to choose the appropriate estimation method in structural equation modeling. Since non-normal data can affect the results of both factor analysis and multiple regression (Hair et al., 2010), tests of skewness and kurtosis were used to determine the normality of the five constructs. Extremely non-normal data sets which have a skewness of over 2 and kurtosis over 7 must use the weighted least square estimate instead of the maximum likelihood estimate (Kline, 1998). Table 4.7(a) and 4.7 (b) below summarizes the key statistics for normality assessment for the female and male celebrity respectively.

Table 4.7(a) Summary of means, standard deviations, skewness and kurtosis for major constructs- female celebrity

<table>
<thead>
<tr>
<th>Construct</th>
<th>No. of items in scale</th>
<th>Mean</th>
<th>SD</th>
<th>Skewness</th>
<th>Kurtosis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attractiveness</td>
<td>5</td>
<td>2.91</td>
<td>.64</td>
<td>.79</td>
<td>4.15</td>
</tr>
<tr>
<td>Trustworthiness</td>
<td>5</td>
<td>2.81</td>
<td>.63</td>
<td>1.12</td>
<td>4.66</td>
</tr>
<tr>
<td>Expertise</td>
<td>5</td>
<td>2.58</td>
<td>.56</td>
<td>-.20</td>
<td>.48</td>
</tr>
<tr>
<td>Familiarity</td>
<td>3</td>
<td>1.97</td>
<td>.59</td>
<td>.15</td>
<td>.24</td>
</tr>
<tr>
<td>Likability</td>
<td>3</td>
<td>2.02</td>
<td>.66</td>
<td>.18</td>
<td>.12</td>
</tr>
</tbody>
</table>
Table 4.7(b)  Summary of means, standard deviations, skewness and kurtosis for major constructs- male celebrity

<table>
<thead>
<tr>
<th>Construct</th>
<th>No. of items in scale</th>
<th>Mean</th>
<th>SD</th>
<th>Skewness</th>
<th>Kurtosis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attractiveness</td>
<td>5</td>
<td>2.46</td>
<td>.75</td>
<td>.53</td>
<td>.05</td>
</tr>
<tr>
<td>Trustworthiness</td>
<td>5</td>
<td>2.28</td>
<td>.84</td>
<td>.82</td>
<td>.15</td>
</tr>
<tr>
<td>Expertise</td>
<td>5</td>
<td>2.20</td>
<td>.93</td>
<td>.78</td>
<td>.12</td>
</tr>
<tr>
<td>Familiarity</td>
<td>3</td>
<td>1.85</td>
<td>.54</td>
<td>.80</td>
<td>1.2</td>
</tr>
<tr>
<td>Likability</td>
<td>3</td>
<td>2.1</td>
<td>.65</td>
<td>.94</td>
<td>1.14</td>
</tr>
</tbody>
</table>

Tables 4.7 (a) and (b) show that the data meet the normality criteria of Kline (1998) and are therefore suitable for the application of the maximum likelihood estimation method in structural equation modeling. According to Kline (1998), only a skewness of above 3.0 is considered extremely skewed and kurtosis of above 7 as extreme kurtosis. Despite the relatively high kurtosis values of ‘attractiveness’ and ‘trustworthiness’, the dataset for the female celebrity is still within the acceptable range of normality.

To prepare the data for multiple regression analysis, tests were also conducted to assess the relationship between the independent and dependent variables as well as among the independent variables. High degrees of multicollinearity can affect the accuracy of the regression coefficients and cause difficulty in separating the effect of the individual variables on the dependent variables (Hair et al., 2010). The values of the variance inflation factor (VIF) were used to ascertain if any of the independent variables were collinear, i.e. linearly related with each other. In addition, an assessment of the correlation coefficients helped determine if the five constructs and the purchase decision variables were adequately correlated for multiple regression analysis. At the same
time, the five constructs were hypothesized to correlate positively to one another. The results are presented in Tables 4.8, 4.9 and 4.10 below.

The variance inflation factors for the five independent variables showed that multicollinearity was not a problem with the data in this study. Variables with VIF values of above 10 would have a correlation of more than 0.90 with other variables, which reflects a problem with multicollinearity (Hair et al., 2010). As can be seen from Table 4.8 below, the variables in the female and male datasets of this study have rather low VIF values of between 1.51 and 2.90. The absence of high correlation is further confirmed by the correlation matrix tables.

Table 4.8 Test of multicollinearity: variance inflation factors (VIF) (female celebrity/male celebrity)

<table>
<thead>
<tr>
<th>Independent Variables</th>
<th>Dependent Variables</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Self-Purchase F/M</td>
</tr>
<tr>
<td></td>
<td>(consider)</td>
</tr>
<tr>
<td></td>
<td>(definite)</td>
</tr>
<tr>
<td>Female Celeb</td>
<td>Attractiveness</td>
</tr>
<tr>
<td>Male Celeb</td>
<td></td>
</tr>
<tr>
<td>Female Celeb</td>
<td>Trustworthiness</td>
</tr>
<tr>
<td>Male Celeb</td>
<td></td>
</tr>
<tr>
<td>Female Celeb</td>
<td>Expertise</td>
</tr>
<tr>
<td>Male Celeb</td>
<td></td>
</tr>
<tr>
<td>Female Celeb</td>
<td>Familiarity</td>
</tr>
<tr>
<td>Male Celeb</td>
<td></td>
</tr>
<tr>
<td>Female Celeb</td>
<td>Likability</td>
</tr>
<tr>
<td>Male Celeb</td>
<td></td>
</tr>
</tbody>
</table>
The correlation matrix tables below (Tables 4.9 and 4.10) identified considerable differences between consumers’ perception towards the female and male celebrity. For the female celebrity, ‘attractiveness’, ‘trustworthiness’ and ‘expertise’ were all positively correlated to one another, with moderately high coefficients of between 0.40 (‘expertise’ and ‘attractiveness’) and 0.56 (‘trustworthiness’ and ‘attractiveness’). Although the two additional dimensions, ‘familiarity’ and ‘likability’, were positively correlated to each other, only ‘likability’ had a significant but low correlation (0.26, \( p=0.00 \)) to another construct (‘expertise’) other than ‘familiarity’. The male celebrity data, on the other hand, revealed a positive, moderately strong relationship among all the five constructs. Their correlation coefficients ranged between 0.40 and 0.74, but mostly between 0.50 and 0.60. The highest correlations were between ‘expertise’ and ‘trustworthiness’ (0.74) and between ‘attractiveness’ and ‘trustworthiness’ (0.70), while ‘familiarity’s’ relationship with ‘attractiveness’ and ‘trustworthiness’ was the lowest (0.40 and 0.44).

In short, the correlation matrices of the five dimensions confirm that the attractiveness, trustworthiness and expertise of a celebrity have indeed a notable, positive relationship. Of the three dimensions, ‘expertise’ seems to have the weakest relationship with the other two dimensions. The two added dimensions, ‘familiarity’ and ‘likability’, are significantly related to the other three dimensions when the celebrity is male but not when the celebrity is female. As suggested by the results of the exploratory factor analysis, the ‘familiarity’ and ‘likability’ of the female celebrity are very closely related, but appear to be viewed quite independently of the other three dimensions. Aside from this, the relationship between ‘trustworthiness’ and attractiveness’ as well as ‘trustworthiness’ and ‘expertise’ seems to be the strongest for both celebrities.
### Table 4.9  Correlation matrix of independent and dependent variables (Female)

<table>
<thead>
<tr>
<th>Variables</th>
<th>attract</th>
<th>trust</th>
<th>expert</th>
<th>fam</th>
<th>like</th>
<th>Selfpur (consider)</th>
<th>Selfpur (def)</th>
<th>Giftgiv (consider)</th>
<th>Giftgiv (def)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attractive</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>*</td>
</tr>
<tr>
<td>Trustworthy</td>
<td>.56**</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Expertise</td>
<td>.40**</td>
<td>.51**</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Familiarity</td>
<td>.01</td>
<td>.02</td>
<td>.11</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Likability</td>
<td>.03</td>
<td>.05</td>
<td>.26***</td>
<td>.65**</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Self pur (consider)</td>
<td>.17*</td>
<td>.09</td>
<td>.01</td>
<td>-.07</td>
<td>-.01</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Self pur (definite)</td>
<td>.14</td>
<td>.15</td>
<td>.06</td>
<td>-.12</td>
<td>-.06</td>
<td>.86**</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Giftgiving (consider)</td>
<td>.16*</td>
<td>.20**</td>
<td>.07</td>
<td>.04</td>
<td>.10</td>
<td>.26***</td>
<td>.23***</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Giftgiving (definite)</td>
<td>.19*</td>
<td>.26***</td>
<td>.06</td>
<td>.03</td>
<td>.05</td>
<td>.18*</td>
<td>.32*</td>
<td>.69*</td>
<td>1</td>
</tr>
</tbody>
</table>

Pearson Correlations; *p≤.05, ** p≤.01, *** p≤.001

### Table 4.10  Correlation matrix of independent and dependent variables (Male)

<table>
<thead>
<tr>
<th>Variables</th>
<th>attract</th>
<th>trust</th>
<th>expert</th>
<th>fam</th>
<th>like</th>
<th>Selfpur (consider)</th>
<th>Selfpur (def)</th>
<th>Giftgiv (consider)</th>
<th>Giftgiv (def)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attract</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trust</td>
<td>.70***</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Expert</td>
<td>.62***</td>
<td>.74***</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fam</td>
<td>.40***</td>
<td>.44***</td>
<td>.59***</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>like</td>
<td>.51***</td>
<td>.51***</td>
<td>.59***</td>
<td>.59***</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Selfpur (consider)</td>
<td>.28***</td>
<td>.27***</td>
<td>.25**</td>
<td>.39***</td>
<td>.35***</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Selfpur (def)</td>
<td>.32***</td>
<td>.27***</td>
<td>.28***</td>
<td>.36***</td>
<td>.45***</td>
<td>.87***</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Giftgiv (consider)</td>
<td>.30***</td>
<td>.27***</td>
<td>.31***</td>
<td>.41***</td>
<td>.31***</td>
<td>.39***</td>
<td>.33***</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Giftgiv (def)</td>
<td>.27***</td>
<td>.20*</td>
<td>.24**</td>
<td>.24**</td>
<td>.28***</td>
<td>.25**</td>
<td>.36***</td>
<td>.71***</td>
<td>1</td>
</tr>
</tbody>
</table>

Pearson Correlations; *p≤.05, ** p≤.01, *** p≤.001
A close examination of the above tables also revealed, contrary to expectation, a rather weak association between the five constructs (the independent variables) and the purchase decision variables (the dependent variables) for both the female and male celebrity. In the female celebrity data, 15 out of the 20 correlation coefficients were not significant, the significant ones with low coefficients of between 0.16 and 0.26. Only ‘attractiveness’ and ‘trustworthiness’ had statistically significant correlations with the purchase intention variables but the coefficients were all below 0.30. Worth noting is the high correlation (0.86, p=0.00) between self-purchase (consider) and self-purchase (definite), which is not the case in a gift-giving situation. In the case of the male celebrity, the positive relationship affected both self-purchase and gift-giving, though the relationship was not as strong in a gift-giving situation. While all five constructs were significantly correlated to the purchase decision variables in the male celebrity data, the relationship was only between weak and moderate, with coefficients ranging between 0.20 (‘trustworthiness’ and ‘giftgiving-definite’) and 0.41 (‘familiarity’ and ‘giftgiving-consider’). Such a weak relationship between the DVs and the IVs suggest that the influence of the five constructs on consumers’ purchase intention might not be as high as hypothesized.

This section has summarized the results of assumption testing with the aggregated values of the five constructs to pave the way for confirmatory factor analysis and multiple regression analysis. Descriptive statistics on the means, standard deviations, skewness and kurtosis identified no major problem with the normality of the aggregated data. The low variance inflation factors of the independent variables confirmed that multicollinearity was not an issue. The correlation matrix tables showed that the data were not highly correlated and revealed noticeable differences between the female and
male datasets and the rather weak relationship between the five constructs and the purchase decision variables. The next section presents the confirmatory factor analysis prior to regression analyses.

4.6 Confirmatory Factor Analysis

The previous section summarized the findings of the major statistical tests on the aggregated values of the major constructs of the credibility scale identified by the exploratory factor analysis. Although the factor structure of the credibility scale for the female celebrity was found to be slightly different from the proposed scale, the proposed factor structure has been verified by exploratory factor analysis through the male celebrity data. The aggregated variables were deemed suitable for factoring from a confirmatory perspective. This section details the process of confirmatory factor analysis (CFA) through the use of structural equation modeling.

4.6.1 CFA and the measurement model

To further validate the structure of the expanded credibility scale, a confirmatory factor analysis was conducted. CFA is most appropriate for testing measures that have been fully developed (Byrne, 2010). Unlike EFA, CFA requires prior specification of the number of factors and the items which load on the respective factors (Hair et al., 2010). The original 3-dimensional credibility scale developed by Ohanian (1990) has been tested and validated in previous literature. The expanded credibility scale incorporating the two additional dimensions ‘familiarity’ and ‘likability’ was tested through exploratory factor analysis earlier on in this study. The 5-dimensional credibility scale was therefore suitable for confirmatory factor analysis, which is often used as a confirmatory test of our measurement theory (Hair et al., 2010).
In CFA, the model which is derived from the theory is tested for consistency with the observed data through structural equation modeling (SEM) (Byrne, 2010). Structural equation modeling has become one of the most popular data analysis techniques used in the social sciences especially in marketing (Baumgartner and Homburg, 1996). Structural equation modeling using AMOS was used to confirm the measurement model developed in this study as it provides a mechanism for validating relationships between constructs and indicators through confirmatory factor analysis (Hoyle, 1995). It assesses the measurement properties of scales and optimizes the theoretical model with data to provide the best fitting structural model (Hair et al., 2010).

The 5-factor measurement model tested in this study represented the proposed 5-factor credibility scale developed for this study. As in Ohanian’s (1990) study, separate models were tested for the male and female celebrities. Figure 4.1 presents a schematic representation of the measurement model used for both the female and male celebrities.

In confirmatory factor analysis, the overall fit of a model helps determine the extent to which the hypothesized model is consistent with the data collected (Kumar and Dillon, 1987). There is no single statistical test which can fully demonstrate the overall fit but there are different types of fit indices which help to determine the degree of congruence between the hypothesized model and the data (Hu and Bentler, 1995). It is considered good research practice to use multiple fit indices instead of relying on one single fit statistic (Hair et al., 2010).
Figure 4.1  Measurement model for the five-factor celebrity credibility scale
4.6.2 Fit indices

Two major types of fit indices were used to determine the overall fit of the two models in this study:

(i) **Absolute fit**

The chi-square statistic is a common goodness-of-fit test for whether the model fits the analysed covariance matrix (Byrne, 2010). Generally speaking, a model is accepted as “fitting” if the fit statistic has a probability value of less than 0.05 (Barrett, 2007). This means that the null hypothesis that there is no difference between the observed and estimated covariance matrices is accepted (Barrett, 2007). However, the chi-square value is known to be affected by sample size - as the sample size increases, the p-value also increases (Hair et al., 2010). The effect of sample size on the value of the chi-square has been of major concern to researchers, with some going as far as recommending against statistical significance testing (Carver, 1978). Others have urged that incremental indices be used to provide additional information on model evaluation (Bentler and Bonett, 1980).

Two alternative measures of overall model fit commonly used in marketing research are the goodness-of-fit index (GFI) and the adjusted goodness-of-fit index (AGFI) (Hulland, Chow and Lam, 1996). Being fit statistics which are less sensitive to sample size (Hair et al., 2010), the GFI and the AGFI measure the proportion of variance and covariance explained by the proposed model (Tanaka and Huba, 1989). GFI and AGFI values of between 0.90 and 0.95 are considered as acceptable fit and those of 0.95 or above a good overall model fit (Hulland, Chow and Lam, 1996).
Like the GFI and the AGFI, the root mean square error of approximation (RMSEA) was an attempt to correct for the tendency of the chi-square statistic to reject models with large sample sizes and numbers of observed variables (Hair et al., 2010). Based on non-centrality and a known distribution, the RMSEA index is a good representation of how well a model fits a population and not just a sample used for estimation (Hair et al., 2010). While some suggest that a value of below 0.05 reflects a reasonable fit (Byrne, 2001), it is generally believed that RMSEA values of 0.08 or lower are acceptable (Hu and Bentler, 1995).

(ii) Incremental or comparative fit

Incremental or comparative fit indices assess how well a proposed model fits in comparison to an alternative baseline ‘null’ model (Hair et al., 2010). The null model is expected to fit the data poorly as it is considered to have higher noncentrality than the proposed model (Raykov and Marcoulides, 2000). Although different SEM programs produce different incremental fit indices, the comparative fit index (CFI) is one of the most widely used due to its relative insensitivity to model complexity (Hair et al., 2010). It has often been recommended to be the fit index of choice (Bentler, 1992). A perfect fit model would produce a CFI value of 1 but CFI values of 0.90 and above are considered acceptable (Hair et al., 2010).

Based on Hair et al.’s (2010) suggestion that multiple fit indices including the chi-square value, one absolute fit index, one incremental fit index, one goodness-of-fit and one badness-of-fit index be used to assess model fit, the following fit indices were selected for this study:
Table 4.1  Goodness of fit indices and criteria used in this study

<table>
<thead>
<tr>
<th>Goodness of Fit Index</th>
<th>Standard Criterion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chi-Square</td>
<td>P &gt; 0.05</td>
</tr>
<tr>
<td>GFI</td>
<td>≥ 0.95 good, ≥ 0.90 acceptable</td>
</tr>
<tr>
<td>AGFI</td>
<td>≥ 0.95 good, ≥ 0.90 acceptable</td>
</tr>
<tr>
<td>RMSEA</td>
<td>≤ 0.08</td>
</tr>
<tr>
<td>CFI</td>
<td>≥ 0.9</td>
</tr>
</tbody>
</table>

Source: developed for this study from Barrett (2007), Hair et al. (2010), Hu and Bentler (1995) and Hulland, Chow and Lam (1996).

4.6.3 Results of confirmatory factor analysis

The 5-factor measurement models for the female celebrity and the male celebrity were assessed separately for their model fit through confirmatory factor analysis. After examining the initial results, the models were tested a second time using adjustments based on the modification indices, more specifically by co-varying the items with high error values, i.e. e6 and e7, e11 and e12 for the female measurement model and e8 and e9 for the male measurement model (see Figure 4.1). The results of the tests are displayed in Table 4.1 below.

While the chi-square statistics were significant for the measurement models of both the female and male celebrity, the fit statistics indicated an acceptable fit. All the indices showed a slight, but not marked, improvement after the items with high error values had been covaried. Although the chi-square statistics had a significant p-value both before and after the covarying, it should be noted that complex models with more than 12 observed variables or large samples of above 200 have the tendency to have chi-square
Table 4.1  Summary of the results of confirmatory factor analysis

<table>
<thead>
<tr>
<th>Fit Index</th>
<th>Female Measurement Model</th>
<th>Male Measurement Model</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Before covarying e6&amp;e7, e11&amp;e12</td>
<td>After covarying e8 &amp; e9</td>
</tr>
<tr>
<td>Chi Square</td>
<td>307.07, df=179 p=0.00</td>
<td>274.27, df=177 p=0.00</td>
</tr>
<tr>
<td>GFI</td>
<td>.85</td>
<td>.86</td>
</tr>
<tr>
<td>AGFI</td>
<td>.80</td>
<td>.82</td>
</tr>
<tr>
<td>RMSEA</td>
<td>.07</td>
<td>.06</td>
</tr>
<tr>
<td>CFI</td>
<td>.91</td>
<td>.93</td>
</tr>
</tbody>
</table>

statistics which are significant (Hair et al., 2010). The value for RMSEA, an absolute fit index, was between 0.06 and 0.07 for both the female and male measurement models, which was below the ≤ 0.08 guideline for this index. The other two fit indices, at between 0.80 and 0.86, were close to the ≥ 0.90 acceptable limit. The final values of the CFI, an incremental fit index and Bentler’s (1992) fit index of choice, were 0.93 for the female measurement model and 0.96 for the male measurement model and well above the ≥0.90 CFI guideline.

The CFA results generally supported both the female and male measurement models and confirmed the validity of the models’ factor structures. The significance of the chi-square statistics is not unusual for measurement models with a reasonably large number of observed variables and samples which are not too small as was the case with this study (21 variables and samples of about 150). Both the CFI and RMSEA indices appeared to be satisfactory. Since the fit statistics of both the female and male measurement models were quite similar, factor structure equivalence was supported.
In other words, the same factor structure is appropriate for both samples.

This section has presented the details of the confirmatory factor analysis performed in this study to assess the overall fit of the measurement model for celebrity credibility. Aside from the popular chi-square statistic commonly used to test the goodness-of-fit, the criteria chosen for this study included other fit indices which are less affected by sample size and model complexity. Based on the fit statistics provided by the confirmatory factor analysis, the values of GFI, AGFI, RMSEA and CFI indicated an acceptable fit for both the female and male measurement models. In the last section of this chapter, the dimensions from the validated 5-factor credibility scale will be used as a set of independent variables for hypothesis-testing.

4.7 Multiple Regression Analyses and Tests of Hypotheses

Since previous tests on the relationship of the variables and on multicollinearity had identified no violation of statistical assumptions, multiple regression analysis was employed to test the proposed hypotheses. Multiple linear regressions were used to relate the five constructs of credibility - ‘attractiveness’, trustworthiness’, ‘expertise’, ‘familiarity’ and ‘likability’- as independent variables to the four purchase intention dependent variables: ‘consider purchasing (self use)’, ‘definitely purchase (self use)’, ‘consider purchasing (gift-giving)’ and ‘definitely purchase (gift giving)’. All five constructs were hypothesized to be related positively to the purchase decision variables. Separate analyses were conducted on the female and male data.

The results are summarized in Tables 4.13, 4.14, 4.15 and 4.16 below. The R square represents the variance of the dependent variable explained by the variation in a set of
independent variables. The F statistic is an indication of whether the set of independent variables is significantly related to the dependent variable. Hair et al. (2010) also recommend the use of the beta weights to compare the relative importance among independent variables. The contribution of individual independent variables to the dependent variable is further reflected in the t-value.

The results for the female celebrity data show that the five independent variables together explain only 4% of the variance (R Square) in respondents’ intention to consider purchasing and definitely purchase the endorsed product for self-use. The effect is not significant, as indicated by the low F-values in both ‘consider purchase’ (1.23) and ‘definitely purchase’ (1.27). An examination of the t-values indicates that, of the five dimensions, only ‘attractiveness’ in ‘consider purchase for self-use’ is significant, with a relatively low t-value of 1.95 and a significance level of 0.05. However, it does not have the same effect in ‘definitely purchase’ for self-use, on which none of the five dimensions is shown to have an impact.

Table 4.13 Impact of the credibility dimensions on purchase intention for the female celebrity (Self-purchase)

<table>
<thead>
<tr>
<th>Independent Variable</th>
<th>Unstandardized Coefficient (B)</th>
<th>Standardized Coefficient (Beta)</th>
<th>t-Stat</th>
<th>Sig T</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attractiveness</td>
<td>0.42</td>
<td>0.20</td>
<td>1.95</td>
<td>0.05</td>
</tr>
<tr>
<td>Trustworthiness</td>
<td>0.04</td>
<td>0.02</td>
<td>0.17</td>
<td>0.86</td>
</tr>
<tr>
<td>Expertise</td>
<td>-0.21</td>
<td>-0.08</td>
<td>-0.84</td>
<td>0.40</td>
</tr>
<tr>
<td>Familiarity</td>
<td>-0.26</td>
<td>-0.11</td>
<td>-1.01</td>
<td>0.31</td>
</tr>
<tr>
<td>Likability</td>
<td>0.16</td>
<td>0.08</td>
<td>0.69</td>
<td>0.49</td>
</tr>
</tbody>
</table>

R Square: .04    F:1.23    Signif F: .30
4.13(b) DV: Definitely purchase (Self)

<table>
<thead>
<tr>
<th>Independent Variable</th>
<th>Unstandardized Coefficient (B)</th>
<th>Standardized Coefficient (Beta)</th>
<th>t-Stat</th>
<th>Sig T</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attractiveness</td>
<td>0.19</td>
<td>0.09</td>
<td>0.94</td>
<td>0.35</td>
</tr>
<tr>
<td>Trustworthiness</td>
<td>0.23</td>
<td>0.11</td>
<td>1.03</td>
<td>0.31</td>
</tr>
<tr>
<td>Expertise</td>
<td>-0.07</td>
<td>-0.03</td>
<td>-0.31</td>
<td>0.75</td>
</tr>
<tr>
<td>Familiarity</td>
<td>-0.31</td>
<td>-0.14</td>
<td>-1.29</td>
<td>0.20</td>
</tr>
<tr>
<td>Likability</td>
<td>0.07</td>
<td>0.03</td>
<td>-0.30</td>
<td>0.76</td>
</tr>
</tbody>
</table>

R Square: 0.04  F:1.27  Signif F: 0.28

In a gift-giving situation, the five independent variables together accounted for a slightly higher percentage of the variance in respondents’ intention to purchase than when purchasing for self-use. The five dimensions were found to explain 6% of the variance in ‘consider purchase’ and 8% in ‘definitely purchase’. This effect was felt particularly on the ‘definitely purchase’ intention, which is significant but with a rather low F-value of 2.58. It was due entirely to ‘trustworthiness’, the only dimension which is significant in ‘definitely purchase’ with a t-value of 2.55. The role of ‘attractiveness’ is highlighted by the fact that it has the highest t-value (1.87) of the five dimensions in a ‘consider purchase’ situation and is the only one which has a noteworthy significance level (p=0.06).
Table 4.14 Impact of the credibility dimensions on purchase Intention for the female celebrity (Gift-giving)

4.14 (a) DV: Consider purchase (Gift)

<table>
<thead>
<tr>
<th>Independent Variable</th>
<th>Unstandardized Coefficient (B)</th>
<th>Standardized Coefficient (Beta)</th>
<th>t-Stat</th>
<th>Sig T</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attractiveness</td>
<td>0.10</td>
<td>0.09</td>
<td>0.89</td>
<td>0.38</td>
</tr>
<tr>
<td>Trustworthiness</td>
<td><strong>0.22</strong></td>
<td><strong>0.20</strong></td>
<td><strong>1.87</strong></td>
<td><strong>0.06</strong></td>
</tr>
<tr>
<td>Expertise</td>
<td>-0.13</td>
<td>-0.10</td>
<td>-1.02</td>
<td>0.31</td>
</tr>
<tr>
<td>Familiarity</td>
<td>-0.05</td>
<td>-0.04</td>
<td>-0.37</td>
<td>0.71</td>
</tr>
<tr>
<td>Likability</td>
<td>0.15</td>
<td>0.14</td>
<td>1.25</td>
<td>0.21</td>
</tr>
</tbody>
</table>

R Square: 0.06  F:1.82  Signif F: 0.11

4.14(b) DV: Definitely purchase (Gift)

<table>
<thead>
<tr>
<th>Independent Variable</th>
<th>Unstandardized Coefficient (B)</th>
<th>Standardized Coefficient (Beta)</th>
<th>t-Stat</th>
<th>Sig T</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attractiveness</td>
<td>0.11</td>
<td>0.09</td>
<td>0.97</td>
<td>0.33</td>
</tr>
<tr>
<td>Trustworthiness</td>
<td><strong>0.31</strong></td>
<td><strong>0.27</strong></td>
<td><strong>2.55</strong></td>
<td><strong>0.01</strong></td>
</tr>
<tr>
<td>Expertise</td>
<td>-0.17</td>
<td>-0.13</td>
<td>-1.34</td>
<td>0.18</td>
</tr>
<tr>
<td>Familiarity</td>
<td>-0.01</td>
<td>-0.01</td>
<td>-0.10</td>
<td>0.92</td>
</tr>
<tr>
<td>Likability</td>
<td>0.08</td>
<td>0.07</td>
<td>0.69</td>
<td>0.49</td>
</tr>
</tbody>
</table>

R Square: 0.08  F:2.58  Signif F: 0.03

The results for the male celebrity data below show that the five independent variables together have a much bigger influence on purchase intention than for the female celebrity. The five dimensions explain 19% of the variance (R Square) in respondents’ intention to consider purchasing and 23% in their intention to definitely purchase the endorsed product for self-use. The effect is significant in both cases, as indicated by the F-values in both ‘consider purchase’ (6.62, sig=0.00) and ‘definitely purchase’ (8.41,
‘Familiarity’ is the only dimension which is significant in ‘consider purchase’, with a t-value of 2.94 (sig=0.00). Nevertheless, ‘likability’ was found to be even more important in changing the intention to ‘definitely purchase’, being also the only dimension which is significant with a t-value of 3.46 (sig=0.00).

Table 4.15 Impact of the credibility dimensions on purchase intention for the male celebrity (Self-purchase)

4.15(a) DV: Consider purchase (Self)

<table>
<thead>
<tr>
<th>Independent Variable</th>
<th>Unstandardized Coefficient (B)</th>
<th>Standardized Coefficient (Beta)</th>
<th>t-Stat</th>
<th>Sig T</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attractiveness</td>
<td>0.19</td>
<td>0.11</td>
<td>0.96</td>
<td>0.34</td>
</tr>
<tr>
<td>Trustworthiness</td>
<td>0.19</td>
<td>0.11</td>
<td>0.88</td>
<td>0.38</td>
</tr>
<tr>
<td>Expertise</td>
<td>-0.26</td>
<td>-0.18</td>
<td>-1.37</td>
<td>0.17</td>
</tr>
<tr>
<td><strong>Familiarity</strong></td>
<td><strong>0.77</strong></td>
<td><strong>0.30</strong></td>
<td><strong>2.94</strong></td>
<td><strong>0.00</strong></td>
</tr>
<tr>
<td>Likability</td>
<td>0.36</td>
<td>0.17</td>
<td>1.63</td>
<td>0.10</td>
</tr>
</tbody>
</table>

R Square: 0.19  F:6.62  **Signif F: 0.00**

4.15(b) DV: Definitely purchase (Self)

<table>
<thead>
<tr>
<th>Independent Variable</th>
<th>Unstandardized Coefficient (B)</th>
<th>Standardized Coefficient (Beta)</th>
<th>t-Stat</th>
<th>Sig T</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attractiveness</td>
<td>0.26</td>
<td>0.14</td>
<td>1.29</td>
<td>0.20</td>
</tr>
<tr>
<td>Trustworthiness</td>
<td>0.00</td>
<td>0.00</td>
<td>0.02</td>
<td>0.98</td>
</tr>
<tr>
<td>Expertise</td>
<td>-0.16</td>
<td>-0.11</td>
<td>-0.86</td>
<td>0.39</td>
</tr>
<tr>
<td>Familiarity</td>
<td>0.41</td>
<td>0.16</td>
<td>1.62</td>
<td>0.11</td>
</tr>
<tr>
<td><strong>Likability</strong></td>
<td><strong>0.74</strong></td>
<td><strong>0.35</strong></td>
<td><strong>3.46</strong></td>
<td><strong>0.00</strong></td>
</tr>
</tbody>
</table>

R Square: 0.23  F:8.41  **Signif F: 0.00**
Table 4.16 Impact of the credibility dimensions on purchase intention for the male celebrity (Gift-giving)

4.16 (a) DV: Consider purchase (Gift)

<table>
<thead>
<tr>
<th>Independent Variable</th>
<th>Unstandardized Coefficient (B)</th>
<th>Standardized Coefficient (Beta)</th>
<th>t-Stat</th>
<th>Sig T</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attractiveness</td>
<td>0.17</td>
<td>0.14</td>
<td>1.22</td>
<td>0.22</td>
</tr>
<tr>
<td>Trustworthiness</td>
<td>-0.00</td>
<td>-0.00</td>
<td>-0.01</td>
<td>0.99</td>
</tr>
<tr>
<td>Expertise</td>
<td>0.02</td>
<td>0.02</td>
<td>0.13</td>
<td>0.89</td>
</tr>
<tr>
<td><strong>Familiarity</strong></td>
<td><strong>0.56</strong></td>
<td><strong>0.32</strong></td>
<td><strong>3.12</strong></td>
<td><strong>0.00</strong></td>
</tr>
<tr>
<td>Likability</td>
<td>0.06</td>
<td>0.04</td>
<td>0.41</td>
<td>0.68</td>
</tr>
</tbody>
</table>

R Square: 0.19  F:6.44  **Signif F: 0.00**

4.16 (b) DV: Definitely purchase (Gift)

<table>
<thead>
<tr>
<th>Independent Variable</th>
<th>Unstandardized Coefficient (B)</th>
<th>Standardized Coefficient (Beta)</th>
<th>t-Stat</th>
<th>Sig T</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attractiveness</td>
<td>0.23</td>
<td>0.20</td>
<td>1.72</td>
<td><strong>0.09</strong></td>
</tr>
<tr>
<td>Trustworthiness</td>
<td>-0.10</td>
<td>-0.09</td>
<td>-0.66</td>
<td>0.51</td>
</tr>
<tr>
<td>Expertise</td>
<td>0.04</td>
<td>0.05</td>
<td>0.34</td>
<td>0.73</td>
</tr>
<tr>
<td>Familiarity</td>
<td>0.13</td>
<td>0.08</td>
<td>0.73</td>
<td>0.47</td>
</tr>
<tr>
<td>Likability</td>
<td>0.20</td>
<td>0.15</td>
<td>1.38</td>
<td>0.17</td>
</tr>
</tbody>
</table>

R Square: 0.11  F:3.43  **Signif F: 0.01**

The effect of the five dimensions seemed less clear in a gift-giving situation. Though significant, the independent variables explain 19% of the variance in ‘consider purchase’ but less (11%) in ‘definitely purchase’. Once again, only one dimension, ‘familiarity’, had a significant effect on the intention to ‘consider purchase’, with a t-value of 3.12 (sig=0.00). Despite the significant effect of the five dimensions on the ‘definitely purchase’ intention, none of the dimensions had a distinctively positive contribution to this total effect.
Table 4.1 below summarizes the effect of the five dimensions on consumers’ purchase intention. The summary confirms the positive impact of credibility on purchase intention while highlighting the differences between a female celebrity and a male celebrity. The male celebrity’s stronger impact on purchase intention than the female celebrity traces primarily to ‘familiarity’, which influences consumers’ intention to consider purchasing the product both for self-use and gift-giving. However, it is ‘likability’ which makes consumers decide to purchase the product in a self-use situation. In the case of a female celebrity, ‘attractiveness’ influences consumers’ intention to consider purchasing the endorsed product, but only ‘trustworthiness’ can have a positive impact on both ‘consider purchase’ and ‘definitely purchase’ in a gift-giving situation.

In brief, the hypotheses regarding the influence of the five underlying dimensions of credibility on consumers’ purchase intention in Hong Kong were tested in this section. A celebrity’s perceived expertise did not have any significant impact on consumers’ purchase intention in Hong Kong. While a female celebrity’s attractiveness influenced consumers to consider purchasing for self-use, only the perceived trustworthiness of a female celebrity could influence consumers’ decision to consider purchasing and definitely purchase the product, though in a gift-giving situation. A male celebrity’s familiarity influenced consumers’ intention to consider purchasing a product for self-use and gift-giving, but only likability was able to influence consumers’ decision to definitely purchase the product for self-use, but not enough for gift-giving.
4.8 Results of Hypothesis Testing

Prior to concluding this chapter, the following table summarizes the findings of the hypotheses testing based on the results of the analyses described in this chapter. These findings are interpreted in the next chapter.

Table 4.17 Summary of results of hypothesis testing

<table>
<thead>
<tr>
<th>Hypotheses regarding the impact of the dimensions on purchase intention</th>
<th>Self-Use</th>
<th></th>
<th>Gift-giving</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Female</td>
<td>Male</td>
<td>Female</td>
<td>Male</td>
</tr>
<tr>
<td>Hypotheses 1:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The celebrity endorser’s attractiveness will positively influence consumers’ purchase intention in Hong Kong</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>It will positively influence consumers’ intention to consider purchase</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>It will positively influence consumers’ intention to definitely purchase</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Hypothesis 2:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The celebrity endorser’s trustworthiness will positively influence consumers’ purchase intention in Hong Kong</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>It will positively influence consumers’ intention to consider purchase</td>
<td>No</td>
<td>No</td>
<td>Yes**</td>
<td>No</td>
</tr>
<tr>
<td>It will positively influence consumers’ intention to definitely purchase</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Hypothesis 3:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The celebrity endorser’s expertise will positively influence consumers’ purchase intention in Hong Kong</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>It will positively influence consumers’ intention to consider purchase</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>It will positively influence consumers’ intention to definitely purchase</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Hypothesis 4:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The celebrity endorser’s familiarity will positively influence consumers’ purchase intention in Hong Kong</td>
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<tr>
<td>It will positively influence consumers’ intention to consider purchase</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
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<tr>
<td>It will positively influence consumers’ intention to definitely purchase</td>
<td>No</td>
<td>No</td>
<td>No</td>
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**at a lower confidence level

<table>
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<th>Hypothesis 5:</th>
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<td>The celebrity endorser’s likability will positively influence consumers’ purchase intention in Hong Kong</td>
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<td>It will positively influence consumers’ intention to</td>
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<tr>
<td>H7a consider purchase</td>
<td>No</td>
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<td>H7b definitely purchase</td>
<td>No</td>
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<th>Hypothesis 6</th>
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<td>The impact of the dimensions of male celebrity credibility on consumers’ purchase intention is different from the impact of the dimensions of female celebrity credibility-Supported</td>
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**4.9 Conclusion to Chapter Four**

This chapter has presented the process and results of the data analysis for this research. Possibly due to the relative simplicity of the questionnaire and its interesting topic, the survey had achieved a high response rate of 83% and a total sample of 300. Prior to conducting the analyses, the completed questionnaires were examined and four non-usable ones from the male sample were excluded. The data were then coded and input into SPSS and checked for errors. Missing data were checked and the standard score method was used to detect outliers, which resulted in the removal of one case from the female sample. The final sample size was 146 for the male celebrity and 149 for the female celebrity.

Exploratory factor analysis was conducted to check the structure of the scale. Despite some minor problems with cross-loading, the five-factor structure of the credibility scale was confirmed to be the same as the proposed scale for the male celebrity. In the case of the female celebrity, the six indicators of ‘familiarity’ and ‘likability’ were
grouped under one factor while the five indicators for ‘expertise’ were divided into two factors, one representing hard skills and the other emphasizing time and experience. However, the high factor loadings of all the 21 indicators confirmed the validity of the expanded credibility scale.

To further validate the structure of the proposed 5-factor credibility scale, confirmatory factor analysis was conducted using AMOS. Before performing the CFA, the aggregated data of the five constructs were tested for normality and multicollinearity. The correlation matrix tables further reinforced the differences in consumers’ perception of the female and male celebrity. A five-factor measurement model based on the expanded scale proposed in this study was tested separately for the female and male celebrities through confirmatory factor analysis. Despite the significant chi-square statistics of the measurement model, the values of major fit indices confirmed that the model for both celebrities had adequate fit and therefore demonstrated construct validity.

The last phase of data analysis was to ascertain the impact of the five dimensions of celebrity credibility on purchase intention through multiple regression analysis. Even though the results showed that the impact was far from being strong as hypothesized, a stronger effect on purchase intention was felt when the celebrity was a male than a female. Of the five dimensions, only ‘trustworthiness’ and, to some extent, ‘attractiveness’ were found to have an impact in the case of the female celebrity, while ‘familiarity’ and ‘likability’ were the only ones influencing purchase decision in the case of the male celebrity.
CHAPTER FIVE
DISCUSSION AND CONCLUSION

5.1 Introduction
The previous chapters have described the background of this research and presented the analyses and findings of the study. Chapter five discusses the meanings and implications of the findings for both theory and management practice. It also identifies the key limitations of the study and directions for future research.

This final chapter consists of six sections. After the introduction in Section 5.1, Section 5.2 begins by recapping the objectives of the study and the corresponding hypotheses tested in the study. It then considers the findings in the light of prior research to identify the similarities and differences between the findings of this study and previous literature described in the literature review in Chapter 2. The final part of this section discusses the theories in the context of Hong Kong. Section 5.3 on the implications of the findings begins with the theoretical contributions of the study (Section 5.3.1), placing the research findings within the body of knowledge which provides the background for this research. This is followed by a discussion of the practical contributions of the findings (Section 5.3.2) for marketing and advertising managers. Section 5.4 summarizes the limitations and strengths of this study, which lead to the suggestions for future research in Section 5.5. The chapter concludes with an overall review of the objectives and outcomes of this study in Section 5.6.

5.2 Discussion of Results
This study aimed to identify the essential endorser characteristics and their effects for celebrity advertising in Hong Kong. The key question guiding this research was
therefore:

What are the essential characteristics of a credible celebrity endorser and what are their effects on consumers' purchase intention?

The specific objectives of this research were to:

1. confirm the key dimensions of celebrity credibility in the Ohanian (1990) scale for the Hong Kong market
2. develop a more comprehensive measurement of celebrity credibility by incorporating two additional dimensions of source attractiveness, ‘familiarity’ and ‘likability’, into the existing scale
3. measure the effect of celebrity credibility through the impact of the five dimensions on purchase intention (Hypotheses 1a, 1b, 2a, 2b, 3a, 3b, 4a, 4b, 5a and 5b).
4. ascertain the potential differences in the effect of male versus female celebrity credibility on consumers’ purchase intention (Hypothesis 6).

The validity of the Ohanian celebrity credibility scale for Chinese consumers in Hong Kong have been fully supported by the results of the male celebrity data in this study and, to a very large extent, also supported by the female celebrity data. Similar to other studies conducted in Singapore by Pornpitakpan (2003a) and La Ferle and Choi (2005) in Korea, this study confirms the three key dimensions of celebrity credibility: ‘attractiveness’, ‘trustworthiness’ and ‘expertise’ as measured by their respective indicators for Hong Kong Chinese consumers. It is worth noting, however, that the findings differ from a study conducted in Guangzhou in a tourism context (van der Veen and Song, 2010) which resulted in the removal of the dimension ‘trustworthiness’ from the scale due to cross-loading.
Aside from the three dimensions which define celebrity credibility on the Ohanian scale, the results of this study also justify the inclusion of the dimensions ‘familiarity’ and ‘likability’ in the expanded celebrity credibility scale. ‘Familiarity’ and ‘likability’ are major non-physical attributes of McGuire’s (1985) source attractiveness model, which posits that the effectiveness of a message depends on the familiarity and likability of the endorser. They are the two key components of the Performer Q score which marketing managers often use to evaluate the suitability of a celebrity for advertising. Their importance as dimensions of celebrity credibility was supported by the high respondents’ ratings of their indicators in this study, suggesting that respondents in Hong Kong also viewed ‘familiarity’ and ‘likability’ as characteristics of a credible celebrity endorser.

In confirming the factor structure of the expanded celebrity credibility scale, the current study provides further evidence of the need to identify other underlying dimensions of source credibility in celebrity endorsement. The definition of source credibility is consistent with the findings of earlier literature on the structure of source credibility which suggested ‘trustworthiness’ and ‘expertise’ as the two key dimensions of source credibility (Applbaum and Anatol, 1972; Bowers and Philips, 1967; Friedman et al., 1978; Hovland et al., 1953; Whitehead, 1968). It is also in line with major studies in celebrity endorsement literature which have demonstrated the important role of ‘attractiveness’ in celebrity advertising (Baker and Churchill, 1977; Chaiken, 1979; Kahle and Homer, 1985; Kamins, 1990; McGuire, 1985; Patzer, 1983). The validation of the expanded scale has provided support for the inclusion of two additional dimensions which previous researchers had found to be closely related to celebrity source credibility: ‘familiarity’ (Kahle and Homer, 1985; McGuire, 1985) and ‘likability’
(DeSarbo and Harshman, 1985; McGuire, 1985; Patzer, 1983). Hence, this project both confirms and extends previous theory.

Apart from integrating key dimensions of celebrity credibility into one measure, this study also lends support to previous literature which suggested that there is a positive relationship among the various dimensions of celebrity credibility. This is particularly true in the analysis of the male celebrity data, which shows a positive correlation among all the five dimensions. The finding echoes the work of researchers such as Patzer (1983), who demonstrated the favorable effect of ‘attractiveness’ on ‘trustworthiness’, ‘expertise’ and ‘likability’, and Friedman et al. (1978), who showed that ‘trustworthiness’ interacted most strongly with ‘likability’ and ‘awareness/familiarity’. However, although the analysis of the male celebrity data has revealed a significantly positive relationship between ‘familiarity’, ‘likability’ and the other three dimensions, the relationship is not particularly strong.

The relationship between ‘familiarity’, ‘likability’ and the other three dimensions has revealed discernible differences between the male and female celebrity data. While the overall five-factor structure has been validated for both the female and male celebrity through confirmatory factor analysis, for the female celebrity data, ‘familiarity’ and ‘likability’ are only correlated to one another and not to the other three dimensions. The indicators of ‘familiarity’ and ‘likability’ also loaded on the same factor in the initial exploratory factor analysis, which shows that the two may have been indistinguishable in the eyes of the respondents. This finding seems to mean that if a female celebrity is familiar to a target group, she will also be likable. While this association also holds true for a male celebrity, ‘familiarity’ and ‘likability’ are viewed
as two separate attributes instead of one and, unlike the case of the female celebrity, correlate positively with the other three dimensions in contributing to overall celebrity credibility.

The gender differences revealed in this research constitute one of the most important findings of this study. The celebrity’s gender has not been reported as an important issue in celebrity endorsement research, least of all in the study of celebrity source credibility. In Ohanian’s studies (1990, 1991) and in the subsequent studies by Pornpitakpan (2003a, 2003b), for example, there were no major differences in the results of the analyses between the two female and two male celebrities. In the extensive review of celebrity endorsement literature in Chapter 2, only Nataraajan and Chawla’s (1997) study revealed that advertisements with a female endorser were rated as more attractive than ads with a male endorser - hence the need for more research on the role of the endorser’s gender.

The differences in consumers’ perceptions of a credible female celebrity and male celebrity are well exemplified in the effects which the five dimensions of celebrity credibility have on consumers’ purchase intention. The results of this study show that a female celebrity's attractiveness and trustworthiness are the only two dimensions which have a positive impact on purchase intention, while consumers’ familiarity with the male celebrity and his likability are the two dimensions which influence their purchase intention. Given the fact that consumers are overwhelmed with advertisements for personal, beauty and health care products featuring female celebrities, it is not surprising that the trustworthiness, apart from attractiveness, of a female celebrity is an important factor influencing their purchase decision. Unlike female
celebrities, a male celebrity does not have to appear to be particularly handsome or trustworthy to increase consumers’ intention to purchase. What really matters is how familiar and how likable he is to his audience.

The current study lends support to previous studies in celebrity endorsement which have highlighted the positive effect of celebrity advertising and celebrity credibility on purchase intention (Atkin and Block, 1983; Kamins, 1989; Kamins et al., 1989; Lafferty and Goldsmith, 1999; Mowen and Brown, 1981; Tripp, Jensen and Carlson, 1990). More importantly, it confirms the findings of prior celebrity endorsement research conducted in the U.S. and in Asia regarding the positive impact of a celebrity’s ‘attractiveness’, ‘trustworthiness’, ‘familiarity’ and ‘likability’ on consumers’ purchase intention. This positive effect of one or more of the above dimensions has been demonstrated by, among others, Kahle and Homer (1985), La Ferle and Choi (2005), Liu, Huang and Minghua (2007), Pornpitakpan, (2003b), Rodriguez (2008), Till and Busler (1998) and Yoon, Kim and Kim (1998).

The greatest inconsistency in the findings of this study compared to those of previous research is the ineffectiveness of ‘expertise’ in generating consumers’ purchase intention. ‘Expertise’ has been considered by many communication researchers, most notably Hovland et al. (1953) and Applbaum and Anatol (1972), as a key dimension of source credibility. It has been found in celebrity endorsement research in the U.S. and in Asia to have a positive impact on purchase intention (La Ferle and Choi, 2005; Liu, Huang and Minghua, 2007; Ohanian, 1991; Pornpitakpan, 2003b; Till and Busler, 1998; Yoon, Kim and Kim, 1998). Worth noting is the fact that ‘expertise’ was the only dimension which was found to have a positive impact on purchase intention in Ohanian’s (1991)
study, yet it was shown in this study that neither a female celebrity’s expertise nor a
male celebrity’s expertise had any impact on consumers’ intention to purchase the
endorsed product. One possible explanation for this is that Hong Kong consumers are
rather cynical so they do not expect celebrities who are paid to advertise a product to
possess genuine expertise in the product.

While Ohanian’s (1991) study did not uncover any significant difference between a
self-purchase and a gift-giving situation or between consumers’ intention to consider
purchase and actually purchase, this study has revealed major differences in consumers’
purchase decisions under the two situations. In the current study, the attractiveness of
the female celebrity was able to influence consumers’ intention to consider purchasing
the product both for self-use and for gift-giving, but not enough to make consumers
definitely purchase the product. Although the female celebrity’s trustworthiness could
influence consumers’ intention to definitely purchase the product, it was only for
gift-giving. This is in line with the earlier explanation that cynical Hong Kong
consumers do not expect a female celebrity to be trustworthy, but the celebrity’s
perceived trustworthiness is an important factor in gift-giving as consumers want more
quality assurance for a gift so as to avoid the potential ‘loss of face’ which may result
from purchasing the wrong product.

Similar differences were found in the case of the male celebrity, whose ‘likability’ was
found to influence consumers’ intention to definitely purchase the product for self use,
though not for gift-giving. It is interesting to note that the effect of a male celebrity’s
likability seemed to be equivalent to a female celebrity’s trustworthiness in this study.
It is reminiscent of an earlier study by Friedman et al. (1978) which confirmed celebrity
likability to be the most important attribute of ‘trustworthiness’ and urged advertisers to choose a well-liked celebrity. Apart from ‘likability’, familiarity with the male celebrity was found in this study to affect respondents’ intention to consider purchasing the product for self-use and gift-giving. Consumers seem to be more careful when it involves gift-giving, as a male celebrity’s likability could only influence respondents’ intention to definitely purchase the product for self-use.

The finding regarding gender differences is in line with the Match-up Hypothesis which emphasizes the importance of celebrity and product match-up in celebrity endorsement. It is consistent with the findings of Kanungo and Pang’s (1973) seminal study, one of the first to examine the relationship between the gender of the model and the type of product advertised. The importance of attractiveness for a female celebrity in this study reflects the Match-up Hypothesis’ emphasis on physical attractiveness. It also echoes the findings of the two influential studies on the Match-up Hypothesis by Kahler and Homer (1985) and Kamins (1990), which demonstrated the positive impact of attractive celebrities on attractiveness-related products. Although ‘product type’ was not able to be investigated in this study due to the variety of products, the issue of gender points to the existence of a match-up factor which interacts with celebrity source credibility to influence purchase intention - a topic worth considering for future research.

By revealing the differences in the effects of the five dimensions on purchase intention, the study sheds light on the findings of previous research which suggested that the effect of celebrity advertising could be more cognitive than behavioral (Friedman et al., 1978; Caballero and Lumpkin, 1989; Kamins, 1990; Mehta, 1994). Similar to the findings of
Caballero and Lumpkin (1989) and Kamins (1990) which showed that celebrity attractiveness resulted in more favorable attitudes towards the advertisements (cognitive) but not purchase intention (behavioral), a female celebrity’s attractiveness in this study was found to influence only consumers’ intention to consider purchasing (cognitive) but not definitely purchase (behavioral). On the other hand, two dimensions of celebrity credibility - a female celebrity’s trustworthiness and a male celebrity’s likability - were shown to have a behavioral effect on consumers to make them definitely purchase the endorsed product in either a self-purchase or a gift-giving situation. This shows that the effect of celebrity advertising may not be limited to just the cognitive level, but its effect, whether cognitive or behavioral, depends very much on the characteristics of the endorser, thus underlining once again the importance of celebrity credibility.

Perceptions of female and male celebrity credibility and the effect of celebrity credibility on purchase intention revealed in this study have reflected significant differences between Hong Kong Chinese consumers and consumers in the U.S. as well as other parts of Asia. Such findings are in tune with the cross-cultural theories of Hofstede (1991) and Hall (1976), particularly Hall’s concept of high-context culture as manifested in Hong Kong consumers’ rather cynical attitude towards celebrity endorsers. However, despite its supposedly high-context culture, Hong Kong’s consumers do not respond to celebrity endorsement in the same way as consumers in other Asian countries such as Korea (La Ferle and Choi, 2005) or Singapore (Pornpitakpan, 2003b). Indeed, the reaction of the Hong Kong Chinese respondents in this study differed from that of the Mainland Chinese respondents in the study on celebrity endorsement in China by Liu, Huang and Minghua (2007), who found that attractive male athlete endorsers could increase consumers’ purchase intention. These comparisons help to reaffirm the
importance of cultural differences and the role which culture plays in the effect of celebrity advertising.

The findings of this study have several meanings in the context of Hong Kong. Firstly, this study has confirmed that Ohanian’s (1990) definition of celebrity credibility is valid for the Hong Kong Chinese market. This means that, as in the U.S., celebrity credibility is a multi-dimensional construct in Hong Kong which comprises the dimensions ‘attractiveness’, ‘trustworthiness’ and ‘expertise’. Secondly, the results of the study have also justified the inclusion of two additional dimensions, ‘familiarity’ and ‘likability’, to provide a more comprehensive measurement of celebrity credibility. Thirdly, this study has identified significant differences in Hong Kong consumers’ perceptions of a female vs. male celebrity which have not been found in other studies conducted in the U.S., Korea, Singapore, or even Mainland China. It shows that while a male celebrity’s attractiveness, trustworthiness, expertise, familiarity and likability all work together to contribute to the male celebrity’s overall credibility, the familiarity and likability of a female celebrity in Hong Kong act very independently of the other three attributes. This close relationship between a female celebrity’s familiarity and likability highlights perhaps a greater need for a female celebrity than a male celebrity to be both familiar and likable in order to appear credible to Hong Kong Chinese consumers.

The gender differences, particularly in relation to the effects of the dimensions of credibility on purchase intention, are of great importance to celebrity selection in Hong Kong. According to the results of this study, a female celebrity’s attractiveness and trustworthiness and a male celebrity’s familiarity and likability are probably the most
important characteristics to consider when selecting a celebrity for advertising in Hong Kong. That is not to say that the other three dimensions can be neglected, as the credibility dimensions work together to increase the persuasiveness of the message. Although the ultimate objective of a marketing activity is to drive sales, effective persuasive communication depends on overall celebrity credibility which, as this study suggests, is a combination of a celebrity’s trustworthiness, attractiveness, expertise, familiarity and likability.

5.3 Implication of Findings

This study was conducted based on research gaps identified in celebrity endorsement literature regarding celebrity credibility and endorser effectiveness on consumers’ purchase intention. Specifically, the objective of the study was to fill the following gaps in celebrity endorsement research:

- Lack of empirical research in countries outside the U.S., particularly in Chinese consumer markets, on testing the validity of the widely-used Ohanian (1990) tri-component celebrity credibility scale
- Absence of a more comprehensive and effective measurement of celebrity credibility which embodies the key attributes of both source effects models to aid celebrity selection
- Lack of empirical studies on the effects of the dimensions of celebrity credibility on the purchase intention of Chinese consumers in Hong Kong and other parts of China.

5.3.1 Theoretical contributions

The study shows that although several empirical studies have tested the validity of the
Ohanian (1990) scale in Asia, not enough research has been conducted in Chinese consumer markets to identify the inherent differences between Chinese and Western cultures as well as other Asian cultures. Despite the wide use of purchase intention as a measure of the effects of celebrity credibility, the findings of this study, particularly with regard to gender differences, highlight the inadequacy of existing research in this area. As one of the few studies that appear to have been conducted in a truly Chinese consumer market using consumer samples and sophisticated data analysis procedures involving structural equation modeling, this study has significant theoretical implications for a wide body of knowledge in advertising which are summarized below:

5.3.1 (i) For celebrity endorsement research

*Development of a single more comprehensive celebrity credibility scale:* Research on celebrity endorsement has confirmed the important role which the endorser’s credibility has in advertising effectiveness. A major gap in the extant literature on celebrity credibility was the absence of a comprehensive measure of what constitutes celebrity credibility. From the numerous studies which tried to define the multidimensionality of celebrity credibility, the most reliable and widely-accepted measurement of celebrity credibility developed so far has been Ohanian’s (1990) tri-component celebrity credibility scale. This study contributes to the literature on celebrity endorsement through the development of an expanded Ohanian (1990) scale with the inclusion of two additional dimensions. By validating the factor structure of the expanded five-factor scale in Hong Kong, this study provides further proof of the generalizability of the Ohanian scale in Asia while developing a more comprehensive measurement of celebrity credibility for future celebrity endorsement research.
Identification of Gender Differences in Celebrity Credibility: The issue of the celebrity’s gender has not played an important part in previous celebrity endorsement research, which has not identified any major noticeable differences in the effects of the celebrity’s gender. This study has uncovered differences in consumers’ perceptions of female vs. male celebrities and revealed major discrepancies in the effects which a credible female celebrity has on purchase intention versus a credible male celebrity. This important finding offers a new perspective to celebrity endorsement research and provides thereby a major challenge and contribution to the existing theories on celebrity endorser effectiveness.

Substantiation for the cognitive vs. behavioral effects of celebrity source credibility: Existing research has been divided on whether celebrity credibility illicits a cognitive or a behavioral response from consumers. The findings of this research regarding purchase intention shed light on the different responses, both cognitive and behavioral, which the various credibility dimensions of a male celebrity and a female celebrity can generate. The results have shown that while a female celebrity’s attractiveness only influences consumers’ intention to consider purchasing (cognitive), a female celebrity’s trustworthiness and a male celebrity’s likability can have a behavioral effect on consumers in that they intend to definitely purchase the endorsed product. This insight reinforces the importance of selecting the ‘right’ celebrity and contributes to the existing knowledge on celebrity selection, one of the most popular topics in celebrity endorsement literature.

5.3.1(ii) For communication and advertising research

Apart from contributing to knowledge on celebrity endorsement, the findings of this
study also have implications for the parent literature in communications and advertising. The impact of different dimensions of celebrity credibility on the cognitive and behavioral intentions of consumers shows that the effect of celebrity advertising works in accordance with Lavidge and Steiner’s (1961) six-step (awareness- knowledge-liking-preference-conviction-purchase) ‘hierarchy of effects’ model of advertising. This study brings a new perspective to the extant theory by pinpointing the cognitive versus behavioral responses generated by different credibility dimensions of a male and a female celebrity while highlighting the effect of celebrity advertising on different stages of the consumer buy cycle as conceptualized by Lavidge and Steiner (1961). More specifically, it shows that a female celebrity’s attractiveness can take consumers to as far as the ‘preference’ stage to consider purchasing the product, but only a female celebrity’s trustworthiness and a male celebrity’s likability can take consumers through to the final ‘purchase’ stage.

5.3.1(iii) For cross-cultural research

This study conducted in Hong Kong adds to the growing, yet relatively limited, body of knowledge on the effect of cross-cultural differences on consumer perceptions and behaviors in Asia, particularly China. More importantly, by revealing the differences in consumers’ perceptions of and responses to celebrity credibility between Hong Kong consumers and consumers in other parts of China and Asia, the current study has taken cross-cultural research beyond the classic East-West dichotomy. Its findings point to the potential differences among Asian consumers in varying stages of economic development and under different levels of Western influence. Such revelation should stimulate future research across cultures in different parts of China and Asia.
In summary, this study contributes to celebrity endorsement literature by first confirming the validity of a five-factor celebrity credibility scale. Second, it has identified a potentially important gap in existing celebrity endorsement research through its identification of gender differences in endorser effectiveness. Third, findings related to the cognitive and behavioral effects of different credibility dimensions help expand the body of knowledge in advertising research. Finally, the findings based on Hong Kong Chinese consumers reflect potential differences not just between consumers in the West and in the East, but also between Chinese consumers in Hong Kong and other parts of China and Asia. This revelation regarding the inadequacy of the East vs. West theory is significant for cross-cultural research.

5.3.2 Practical contributions

This study has many managerial implications for marketers and advertisers, which are summarized next:

Celebrity Selection: The prevalent use of celebrity endorsement in advertising means that marketers and advertisers are constantly looking for celebrities who can convince consumers to purchase their products or services. Based on the findings of this study and previous research, effective endorsers are credible celebrities who are perceived by consumers to be attractive, trustworthy, expert, familiar and likable. In order to maximize the effectiveness of celebrity advertising and the return on their advertising investment, marketers and advertisers should use the five-factor celebrity credibility scale developed in this study to assess the credibility of celebrity candidates. Given the findings of this study and the considerable amount of research which supports the generalizability of the Ohanian (1990) scale to countries outside the U.S., there is
justification for the use of the expanded scale for celebrity selection in Hong Kong and for initial screening of celebrities in other countries.

*Choice of Female vs. Male Celebrity:* As noted in Chapter 2, discussion or research on the use of female vs. male celebrities has so far been very limited. The findings of this study regarding gender differences have reinforced the importance of celebrity-product match-up and they provide some useful guidelines for marketers and advertisers. For example, since the attractiveness of a female celebrity can induce consumers to consider purchasing the product, female celebrities are probably most effective when endorsing attractiveness-related products such as beauty care products. On the other hand, male celebrities, whose familiarity and likability are the key influencers, may be better for products intended for general consumption such as telecommunication products. Even though all five attributes of credibility are important for a celebrity, different emphasis can be placed in the choice of a female vs. male celebrity. In addition to attractiveness, a female celebrity should be evaluated on her trustworthiness in the context of the endorsed product such as weight loss products. These two attributes are highly correlated and can therefore achieve maximum synergy in influencing purchase intention. For a male celebrity, even though all five credibility dimensions can work together synergistically, it is a top priority to ensure that he is familiar and likable in order to achieve the greatest effect on purchase intention.

*Celebrity Advertising as part of Marketing Strategy:* While the ultimate objective of advertising is to sell products, not all advertising activities can take the consumer through the entire hierarchy of effects from ‘awareness’ to ‘purchase’. This study has demonstrated that celebrity credibility is essential to endorser effectiveness but that the
five credibility dimensions generate different cognitive and behavioral responses from consumers. In the light of these findings, marketing and advertising practitioners need to ensure that celebrity advertising forms part of an integrated marketing campaign with one consistent message which takes the consumer from the ‘awareness’ phase to the final ‘purchase’ stage. Also, since celebrity advertising involves more than just the selection of the right celebrity, marketers and advertisers should consider how the findings of this study impact other elements of the advertising campaign. For example, academics such as Klaus Krippendorff and J.W. Gibson have emphasized the role of visual aids and design in enhancing the credibility of the source. Based on the findings of this study, advertising professionals can consider using visual techniques to make a female celebrity appear more attractive and a male celebrity more likable, thus strengthening the credibility of the endorser and his/her effect on purchase intention.

**Global vs. Local Advertising Strategy:** With the globalization of consumer markets and the growth of a global middle class consumer base, there has been an increasing argument among marketers and advertisers for the use of more economical, standard advertising campaigns across different countries. While this study cannot provide definitive answers to the ongoing debate regarding global vs. local or standardized vs. customized advertising, it does highlight once again the effects of culture on consumer perceptions of advertising in that its findings differ from studies in other countries. International marketing and advertising managers are well advised to take into account the cultural differences in different markets through an appropriate mix of standard and customized advertising for maximum cost-effectiveness.
In brief, this study offers marketing and advertising practitioners a reliable tool to aid celebrity selection. Marketers and advertisers can plan and execute more cost-effective integrated marketing campaigns through a better understanding of the effects of celebrity endorsement on consumers’ purchase decision.

5.4 Limitations of the Study

As with any research, this study is not without limitations. This section elaborates on the major limitations of the study, beginning with the issue of survey research and generalizability. Cross-sectional studies, or surveys completed by a single respondent at a single point in time, of attitude-behavior relationships are particularly vulnerable to the inflation of correlations by common method variance (Lindell and Whitney, 2001). Common method variance (CMV) refers to the variance that is attributable to the assessment of all variables using the same method. Since the respondents in cross-sectional self-report surveys have to provide information on their internal states together with their past behavior related to those states, the correlations between variables may be inflated due to the action of the CMV (Lindell and Whitney, 2001; Spector, 2006). This means that the hypothesized relationships between the dimensions of credibility and consumers’ purchase intention may have been slightly overrated in this study. Further tests using a longitudinal design to collect data over multiple time periods and different methods of measurement, particularly for the credibility constructs and the purchase intention variables, should help shed more light on this issue.

To the researcher’s knowledge, this is the first study in Hong Kong to use a general consumer sample to validate the Ohanian (1990) credibility scale and develop a more
effective measurement of celebrity credibility. Compared to other studies which relied on student samples, this study reflects the opinions of a much broader cross-section of the community. Due to the study’s non-probability, disproportionate sampling method, however, the generalizability of the findings are limited to the celebrities and the products mentioned in the study. Further, since the study was conducted in the form of street intercepts in only one, but a highly popular, location frequented by the general public, the results may or may not be indicative of the Chinese people in Hong Kong. Care should therefore be taken when generalizing the findings to the total population.

Third, a key objective of this study was to develop an effective measurement tool for celebrity credibility through a synthesis of the source credibility and source attractiveness models. The resultant five-factor scale appears to be the most comprehensive, yet rigorous, measurement of celebrity credibility available to date. It was based on Ohanian’s (1990) well-tested and widely-accepted tri-component credibility scale. The two additional dimensions were selected and their measurement scales developed through an extensive review of both academic and trade literature, with reference to the Performance Q score which is widely used by practitioners in the U.S. While ‘familiarity’ and ‘likability’ are probably the most important dimensions of source attractiveness, there may still be other dimensions which can contribute to celebrity credibility, such as ‘similarity’ and ‘awareness’. Also, in view of the cultural differences in consumers’ perceptions of celebrity credibility, the face validity of the scales warrants more exploration.

Fourth, as an extension of Ohanian’s (1991) research, this study measured only one of the three major outcome variables of advertising effectiveness - purchase intention, but
not ‘attitude towards the ad’ and ‘attitude towards the brand’. Since ‘purchase intention’ is the final step in the six-step hierarchy of advertising effects, the full impact of the credibility dimensions on other cognitive measures such as ‘awareness’, ‘liking’ and ‘preference’ were not revealed in the findings. While this study offers a good indication of the effects of the credibility dimensions on advertising effectiveness, it should also be noted that advertising effectiveness is often affected by factors other than the celebrity, such as ad execution and the media, which are beyond the scope of this study.

Fifth, in order to ensure an accurate assessment of celebrity credibility, respondents in this study were asked to suggest the product which they thought was most suitable for the celebrity to endorse instead of being given a pre-determined product. While this method likely resulted in a better measure of respondents’ perceptions of celebrity credibility, it did not allow subsequent analysis of product categories due to the diversity of products mentioned in the study. Since the results of the study indicated the influence of the product match-up factor, the effects that different types of products (eg. high involvement vs. low involvement, attractiveness-related vs. non attractiveness-related) have on consumers’ perceptions of celebrity credibility have yet to be ascertained.

Sixth, multiple goodness of fit indices were employed in this study to ensure that the five-factor celebrity credibility model had optimum fit. These results are nevertheless relative and not absolute and they do not guarantee a reflection of reality (Hair et al., 2010). Good model fit indicates a good representation of relationships between factors but it does not mean that all important factors were included in the model (Bagozzi and
Baumgartner, 1994). It should also be noted that the initial exploratory factor analysis had identified some differences between the factor structure of the female and the male celebrity. The same factor structure based on that of the male celebrity was used for subsequent analyses to facilitate comparison and was further confirmed for both celebrities through confirmatory factor analysis. This may need to be taken into consideration when interpreting and applying the findings related to the female celebrity.

Finally, when preparing the questionnaire, the Ohanian (1990) scale was first translated into Chinese and back into English to ensure that the translation for the dimensions and the indicators matched the original as closely as possible. Nevertheless, as Pornpitakpan (2003a) pointed out, translation into another language might lead to changes in the psychometric property of the scale. It is also difficult to achieve ‘conceptual equivalence’ as people in different cultures may ‘make sense of the surrounding things’ differently (Pornpitakpan, 2003a, p. 190). Such differences were well supported by the findings of this study, which reflected differences between Chinese consumers in Hong Kong and reported findings for Chinese consumers in Singapore (Pornpitakpan, 2003b) and Mainland China (Liu, Huang and Minghua, 2007; van der Veen and Song, 2010). While the inclusion of ‘familiarity’ and ‘likability’ in the five-factor celebrity credibility scale offers for the first time a single scale embodying the key constructs of source credibility and source attractiveness to measure celebrity credibility, its applicability across cultures and across different Chinese-speaking populations still has to be tested.
The above limitations do not undermine the significance of the findings and the contributions made by this study to celebrity endorsement research. Rather, they serve to provide directions for future research, which are discussed in the next section.

5.5 Suggestions for Future Research

This study was a pioneering study in the development of a comprehensive scale to measure celebrity credibility in Hong Kong and its effect on Chinese consumers’ purchase intention. The selection of a consumer sample through street intercepts was a first attempt in celebrity endorsement research to gain insight into the perceptions of the general Chinese population in Hong Kong towards celebrity credibility. Future research may use probability samples to increase the generalizability of the findings. Perhaps more importantly, the use of larger samples will allow more meaningful sub-group analyses on the differences between demographic groups by gender, age, educational level, personal income and product type.

In relation to the celebrity credibility scale, four areas warrant further research. First, the measurement scale should be tested with the inclusion of other potential dimensions of source attractiveness. Additional items of measurement for the two new dimensions, ‘familiarity’ and ‘likability’, can be developed and tested to see if they can further enhance the effectiveness of the scale. More research should be conducted to test the scale with different female and male celebrities to shed more light on the gender issue. Attempts can also be made to include items which measure the effects of the match-up between the celebrity and the endorsed product on consumers’ perceptions and purchase intentions.
The findings of this study point to the need for research on the effects of the credibility dimensions on different stages of the consumer purchase cycle. The effects should be studied in conjunction with the celebrity’s gender and the type of products endorsed (e.g., high-involvement vs. low-involvement, luxury goods vs. fast-moving consumer products) as well as the purchase situations (self-purchase vs. gift-giving). Other outcome variables of advertising effectiveness such as ‘attitude towards the ad’ and ‘attitude towards the brand’ can also be added to future research to provide a more comprehensive understanding of the effects of different credibility dimensions on the consumers’ buy cycle. This will help marketing and advertising managers to maximize the effective use of celebrity advertising in their overall marketing planning.

Finally, more tests on the ‘newly-confirmed’ five-factor celebrity credibility scale should be conducted in different countries to assess its applicability across cultures. For a large country such as China, future research should try to identify any potential differences between Chinese consumers’ perceptions of celebrity credibility in different parts of China with various levels of western exposure. The findings of this study have revealed differences in consumers’ perceptions in Hong Kong (a Chinese city with a long English heritage), in the ‘nouveau-riche’ city of Guangzhou (van der Veen and Song, 2010) and the more conservative Chinese capital, Beijing (Liu, Huang and Minghua, 2007). Testing the scale in large cities such as the highly westernized city of Shanghai and other more traditional cities such as Wuhan in Central China and Xian in the north could help determine the applicability of the scale in the large and likely diverse Chinese consumer market.
5.6 Conclusion

This research has extended the theory concerning the underlying dimensions of celebrity credibility and tested their impact on Chinese consumers’ purchase intention in Hong Kong. The primary objective was to facilitate the selection of celebrity endorsers through the development and validation of an effective scale to measure the credibility of a celebrity endorser and to test its effectiveness in bringing about consumer responses. Hypotheses regarding the impact of the credibility dimensions on purchase intention were developed based on the extant literature. The results revealed differences in the way a credible female celebrity and a credible male celebrity exerted their influence on purchase intention. The positive influence of a female celebrity traced to her attractiveness and trustworthiness, while a male celebrity’s familiarity and likability were the key factors.

This study contributes to knowledge in the field of communication and advertising research and especially in the area of celebrity endorsement. Although the study was conducted only in Hong Kong, it should set the stage for further research in the expansive Mainland Chinese market. The findings of this study, some of which have not appeared in previous literature, may have implications beyond the Chinese cultural context of Hong Kong. Future research to shed more light on these findings should provide further academic and managerial insights which will be beneficial to the study and practice of celebrity advertising in the global marketplace.
References


Appendix 3.1  
Survey questionnaire on Moses Chan/Joey Yung (English version)

1. Are you a Hong Kong resident aged 18+?  
☐ Yes  ☐ No (If not, please terminate here and thank you)

2. Is the male actor Moses Chan/female singer Joey Yung familiar to you?  
☐ Yes  ☐ No (If not, please terminate here and thank you)

3. What do you think would be the most appropriate type of product for Moses Chan/Joey Jung to endorse in advertising?  
(please write down product category) : ________________________

4. If Moses Chan/Joey Yung is to endorse the above product, how will you rate him/her (please check the appropriate box):

(i) Attractiveness
attractive [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] unattractive
classy [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] not classy
handsome/beautiful [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] ugly
elegant [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] plain
sexy [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] not sexy

(ii) Trustworthiness
dependable [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] undependable
honest [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] dishonest
reliable [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] unreliable
sincere [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] insincere
trustworthy [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] untrustworthy
(iii) **Expertise**

- **expert** [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] not an expert
- **experienced** [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] not experienced
- **knowledgeable** [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] unknowledgeable
- **qualified** [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] unqualified
- **skilled** [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] unskilled

(iv) **Familiarity**

- **familiar** [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] unfamiliar
- **well known** [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] unknown
- **high exposure** [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] low exposure

(v) **Likability**

- **Likable** [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] unlikable
- **charming** [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] not charming
- **popular** [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] unpopular

5. **Purchase Intent (Self Use)**

If the endorsed product is appropriate for self use, (if not, please proceed to Q6),

(i) Will you **consider** purchasing the endorsed product?

- will consider [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] will not consider purchasing

(ii) Will you **definitely** purchase the endorsed product?

- will definitely [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] will definitely not purchase

6. **Purchase Intent (Gift-giving)**

If the endorsed product is appropriate for gift-giving,

(i) Will you **consider** purchasing the endorsed product?

- will consider [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] will not consider purchasing
(ii) Will you **definitely** purchase the endorsed product?

[ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ]

will purchase

[ ] definitely not purchase

7. **Respondent’s Profile**

Gender

[ ] male

[ ] female

Age

[ ] 19-25

[ ] 26-29

[ ] 30-39

[ ] 40 years or above

Education

[ ] secondary or below

[ ] tertiary or above

Occupation

[ ] clerical and service workers

[ ] managers and executives

[ ] professionals (eg. teachers and engineers)

[ ] students

[ ] homemakers

[ ] others (eg. self-employed, retired)

Monthly Personal Income

[ ] $10,000 or below

[ ] $10,001-$20,000

[ ] $20,001-$40,000

[ ] above $40,000

[ ] not applicable

~ End~

Thank you for your participation. Kindly place the completed questionnaire anonymously into the collection box in front of you.
1. 請問您是否年滿十八歲的香港居民?
   □ 是 □ 否 (如答 “否”, 請毋須繼續, 謝謝)

2. 請問您知道誰是男演員陳豪/女歌手容祖兒嗎?
   □ 知道 □ 不知道 (如答“不知道”, 請毋須繼續, 謝謝)

3. 您認爲陳豪/容祖兒最適宜為什麼種類產品的廣告做代言人?
   (請填寫產品種類): ______________________

4. 如果陳豪/容祖兒代言這類產品的廣告, 您會怎樣評估他/她(請在適當的括弧內劃一個交叉):

   (i) 吸引力
       很吸引 [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] 不吸引
       很有格調(有 class) [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] 沒有格調(冇 class)
       英俊/美麗 [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] 醜陋
       高貴 [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] 平庸
       性感 [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] 不性感

   (ii) 可信度
       可靠 [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] 不可靠
       誠實 [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] 不誠實
       可信賴 [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] 不可信賴
       正直 [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] 虛僞
       可信 [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] 不可信

   (iii) 專業性
       專家 [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] 非專家
       有經驗 [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] 沒有經驗
       有知識 [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] 沒有知識
       合資格 [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] 不合資格
       很熟練 [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] 不熟練
熟悉度

很熟悉 [ ] [ ] [ ] [ ] [ ] [ ] [ ] 不熟悉
高知名度 [ ] [ ] [ ] [ ] [ ] [ ] [ ] 低知名度
曝光率高 [ ] [ ] [ ] [ ] [ ] [ ] [ ] 曝光率低

(iv) 令人喜爱度

令人喜爱 [ ] [ ] [ ] [ ] [ ] [ ] [ ] 不令人喜爱
很有魅力 [ ] [ ] [ ] [ ] [ ] [ ] [ ] 没有魅力
很受欢迎 [ ] [ ] [ ] [ ] [ ] [ ] [ ] 不受欢迎

5. 购买意愿（自用）

如果这个代言的产品是适合您自用的话，(如不适合，请跳去问题6)
(i) 您会考虑购买这个代言的产品吗?

会考虑 [ ] [ ] [ ] [ ] [ ] [ ] [ ] 不会考虑
(ii) 您一定会购买这个代言的产品吗?

一定会 [ ] [ ] [ ] [ ] [ ] [ ] [ ] 一定不会

6. 购买意愿（送礼）

如果这个代言的产品是适合送礼的话，
(i) 您会考虑购买这个代言的产品送礼吗?

会考虑 [ ] [ ] [ ] [ ] [ ] [ ] [ ] 不会考虑
(ii) 您一定会购买这个代言的产品送礼吗?

一定会 [ ] [ ] [ ] [ ] [ ] [ ] [ ] 一定不会

7. 受访者资料

性别 [ ] 男 [ ] 女

年齢 [ ] 19-25 [ ] 26-29 [ ] 30-39 [ ] 40 或以上

教育程度 [ ] 中學或以下 [ ] 大專或以上

職業 [ ] 文書及服務性員工 [ ] 經理及行政人員

[ ] 專業人士（如教師及工程師） [ ] 學生

[ ] homemakers 家庭主婦 [ ] 其它（如自僱及退休人士）

個人每月收入 [ ] $10,000 或以下 [ ] $10,001-$20,000

[ ] $20,001-$40,000 [ ] $40,000 以上 [ ] 不適用

多謝閣下的參與，並請將填妥的問卷以不記名形式直接放進面前的收集箱內。
Appendix 3.3
Participants’ Information Sheet for Pilot Study (English version)

Chief Investigator / Associate Professor Alison Dean
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Callaghan NSW 2300 Australia
Phone (02) 4921 7393
Fax: (02) 4921 6911
Alison.Dean@newcastle.edu.au

Information Statement for the Pilot Study on Celebrity Advertising in Hong Kong

You are invited to participate in the abovementioned pilot study that is being conducted by A/P Alison Dean and Ruth Kan, DBA Candidate from the Newcastle Business School in Australia. The student researcher, Ruth Kan, is based in Hong Kong.

Why is the research being done?

Celebrities are widely used in advertising in Hong Kong and around the world. Past research has shown that the effectiveness of a celebrity endorser depends on his/her credibility as an endorser for the product. This is a pilot study for a research project which aims to better understand Hong Kong consumers’ perceptions of celebrity credibility and its effect on consumers’ intention to purchase the endorsed product.

Who can participate in the research?

If you are a Chinese-speaking resident of Hong Kong aged 18+, you are eligible to participate in the survey.

What choice do you have?

Participation in this research is entirely voluntary.

The survey is completely anonymous so that neither responses nor individuals can be identified. If you do decide to participate, you may withdraw from the project at any time prior to the completion of the survey. You cannot withdraw once you have completed and returned the survey.
What you are being asked to do?

The survey is on source credibility in celebrity advertising and the effect of celebrity credibility on consumers’ purchase intention. If you agree to participate, you are required to complete the questionnaire survey on the spot and inform the researcher of any problems which you may encounter in the process. Completed questionnaires should be placed directly into the collection box in front of you.

How much time will it take?

It will take approximately five minutes to complete.

What are the risks and benefits of participating?

There are neither risks nor direct benefits for any individual participant. However, it is hoped the research will lead to improvements in the quality of advertising in Hong Kong.

How will your privacy be protected?

As the information and data collected in this research is anonymous, no individual respondent or survey is able to be identified. The completed questionnaires will be securely stored in the researcher’s home in Hong Kong. Only the researcher will have access to the completed questionnaires. The collected data will be kept on a password-protected PC in the researcher’s home in Hong Kong and on her supervisor’s computer in SRS 125 of the University of Newcastle’s Callaghan Campus in Australia. Electronic access to the data will only be available to the researcher and her supervisor. Both the questionnaires and electronic data will be kept for five years and then destroyed.

How will the information collected be used?

Where applicable, the results from this pilot study will be used to improve the final design of the questionnaire survey for the actual research project. Participants can obtain a summary of the results of the research by emailing the researcher (kanliu@netvigator.com) after August 31, 2012.

What do you need to do to participate?

Please read this Participant Information Statement and be sure you understand its contents
before you commence the survey. If there is anything you do not understand, or you have questions, contact the researcher (details below).

**Further information**

If you would like further information please contact the researcher, Ruth Kan, by phone (852-90138056) or via email (kanliu@netvigator.com). Thank you for considering this invitation.

Yours sincerely

Alison M Dean, Chief Investigator

**Complaints about this research**

This project has been approved by the University’s Human Research Ethics Committee, Approval No. H-2011-0207. Should you have concerns about your rights as a participant in this research, or you have a complaint about the manner in which the research is conducted, it may be given to the researcher, or, if an independent person is preferred, to the Human Research Ethics Officer, Research Office, The Chancellery, The University of Newcastle, University Drive, Callaghan NSW 2308, Australia, telephone (02) 49216333, email Human-Ethics@newcastle.edu.au.
Appendix 3.4
Participants’ Information Sheet for Pilot Study (Chinese version)

調查導師/Alison Dean 副教授
Newcastle Business School
University of Newcastle
Callaghan NSW 2300 Australia
電話 (02) 4921 7393
傳真 (02) 4921 6911
Alison.Dean@newcastle.edu.au

有關在香港用名人賣廣告的試驗研究
資料說明

現誠邀閣下參與上述試驗研究，這項研究是由澳洲紐卡素大學的 Alison Dean 副教授及居於香港的博士研究生簡迎芝所負貴。

為什麼要做此項研究？
香港和世界各地均常用名人賣廣告。過去的調查顯示，名人作代言人的功效，取決於他/她作爲產品代言人的可信度。此項研究的目的，是更深入瞭解香港消費者對名人可信度的看法，與及其對於消費者購買該代言產品意願的影響。

誰能參與此項調查？
如閣下是年滿十八歲，識中文的香港居民，便有資格參與這個調查。

有什麼選擇？
參與這項調查，純屬自願。
由於此調查是以不記名形式進行，故不會對答案和個別受訪者作記認。如決定參與後，閣下可在完成回答問卷前隨時退出。但如已完成調查及交回問卷，則不可再退出。

受訪者需要做什麼？
此調查是關於名人賣廣告『訊息來源可信度』，與及『名人可信度』對消費者購買意願之影響。如閣下同意參與，閣下需立刻填妥問卷，並將在填寫過程中可能遇到的任何問題，告知研究員，然後將填妥的問卷放進調查員的收集箱內。

需時若干？
整個過程需時若五分鐘。
參加此項調查，有何風險及利益？
此調查對受訪者沒有任何風險或直接利益；惟調查結果可望有助提升香港廣告的水準。

怎樣保障受訪者的私隱？
由於這調查是以不記名形式收集數據，故不可能辨別個別受訪者的身份。各問卷的資料亦只會綜合起來作分析。填妥的問卷將被緊鎖於研究生位於香港羅便臣道 8 號樂信臺 2 座 2D 之居所內，只有研究生本人可接觸到。問卷所收集的資料，則會被儲存於研究生居所內的一部有密碼保護的私人電腦，與及其導師在澳洲紐卡素大學 Callaghan 分校 SRS125 辦公室之電腦內。只有研究生及其導師可透過電腦接觸得到資料。所有問卷及電腦資料，會被儲存五年然後毀滅。

所得資料作何用途？
如適用的話，是次試驗研究的結果，會用來改善是次研究計劃的問卷調查的最終設計。參加者如欲取得此研究結果的摘要，可於 2012 年 8 月 31 日後向研究生以電郵 (kanliu@netvigator.com) 索取。

要怎樣做才可參與此項調查？
在調查開始填寫問卷前，請細讀此有關參加者的資料單張，並確保清楚瞭解其內容。如有任何不明白或有任何疑問，請與研究生聯絡（詳情見下）。

其它資料
如欲索取更多資料，請直接致電 852-90138056 或電郵 kanliu@netvigator.com，與研究生簡迎芝聯絡。感謝您考慮這邀請。

調查主管
Alison M Dean

有關此項研究的投訴
此項研究計劃已獲大學人類研究道德規範委員會批准，批准號碼為 H-2011-0207。如閣下對參與此項研究的權利有任何顧慮，或對是次研究的進行方式有任何投訴，可告知研究生；如傾向獨立人士，則可向大學的人類研究道德規範官員投訴。

地址: Human Research Ethics Officer, Research Office, The Chancellery, The University of Newcastle, University Drive, Callaghan NSW 2308, Australia, 電話號碼: (02) 49216333, 電郵: Human-Ethics@newcastle.edu.au.
Appendix 3.5
Participants’ Information Sheet for Actual Survey (English version)

Chief Investigator / Associate Professor Alison Dean
Newcastle Business School
University of Newcastle
Callaghan NSW 2300 Australia
Phone (02) 4921 7393
Fax: (02) 4921 6911
Alison.Dean@newcastle.edu.au

Information Statement for the Survey on Celebrity Advertising in Hong Kong

You are invited to participate in the abovementioned research project that is being conducted by A/P Alison Dean and Ruth Kan, DBA Candidate from the Newcastle Business School in Australia. The student researcher, Ruth Kan, is based in Hong Kong.

Why is the research being done?

Celebrities are widely used in advertising in Hong Kong and around the world. Past research has shown that the effectiveness of a celebrity endorser depends on his/her credibility as an endorser for the product. This research aims to better understand Hong Kong consumers’ perceptions of celebrity credibility and its effect on consumers’ intention to purchase the endorsed product.

Who can participate in the research?

If you are a Chinese-speaking resident of Hong Kong aged 18+, you are eligible to participate in the survey.

What choice do you have?

Participation in this research is entirely voluntary.

The survey is completely anonymous so that neither responses nor individuals can be identified. If you do decide to participate, you may withdraw from the project at any time prior to the completion of the survey. You cannot withdraw once you have completed and returned the survey.
What you are being asked to do?

The survey is on source credibility in celebrity advertising and the effect of celebrity credibility on consumers’ purchase intention. If you agree to participate, you are required to complete the questionnaire survey on the spot and place the completed survey in the collection box in front of you.

How much time will it take?

It will take approximately five minutes to complete.

What are the risks and benefits of participating?

There are neither risks nor direct benefits for any individual participant. However, it is hoped the research will lead to improvements in the quality of advertising in Hong Kong.

How will your privacy be protected?

As the data collected in this research is anonymous, no individual respondent or survey is able to be identified. Information from individual questionnaires will be aggregated for analysis. The completed questionnaires will be securely stored in the researcher’s home in Hong Kong. Only the researcher will have access to the completed questionnaires. The collected data will be kept on a password-protected PC in the researcher’s home in Hong Kong and on her supervisor’s computer in SRS 125 of the University of Newcastle’s Callaghan Campus in Australia. Electronic access to the data will only be available to the researcher and her supervisor. Both the questionnaires and electronic data will be kept for five years and then destroyed.

How will the information collected be used?

The results from this research will be analysed and reported in the researcher’s DBA dissertation for submission to the University of Newcastle in Australia. The results may be used to prepare an academic article for publication in a marketing journal. Participants can obtain a summary of the results of the research by emailing the researcher (kanliu@netvigator.com) after August 31, 2012.
What do you need to do to participate?

Please read this Participant Information Statement and be sure you understand its contents before you commence the survey. If there is anything you do not understand, or you have questions, contact the researcher (details below).

Further information

If you would like further information please contact the researcher, Ruth Kan, by phone (852-90138056) or via email (kanliu@netvigator.com). Thank you for considering this invitation.

Yours sincerely

Alison M Dean, Chief Investigator

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有關在香港用名人賣廣告的調查
資料說明

現誠邀閣下參與以上之調查研究。這項研究是由澳洲紐卡素大學的 Alison Dean 副教授及居於香港的博士研究生簡迎芝所負責。

為何要做此項研究？
香港和世界各地均常任名人賣廣告。過去的調查顯示，名人作代言人的功效，取決於他/她作為產品代言人的可信度。此項研究的目的，是更深人瞭解香港消費者對名人可信度的看法，與及他們對於消費者購買該代言產品意願的影響。

誰能參與此項調查？
如閣下是年滿十八歲，識中文的香港居民，便有資格參與這個調查。

有何選擇？
參與這項調查，純屬自願。
由於此調查是以不記名形式進行，故不會對答案和個別受訪者作記認。如決定參與後，閣下可在完成回答問題前隨時退出。但如已完成調查及交回問卷，則不可再退出。

受訪者需要做什麼？
此調查是關於名人賣廣告之『訊息來源可信度』，與及『名人可信度』對消費者購買意願之影響。如閣下同意參與，閣下需立刻填妥問卷，然後將填妥的問卷放進調查員的收集箱內。

需時若干？
填寫問卷只需五分鐘。
參加此項調查，有何風險及利益？
此調查對受訪者沒有任何風險或直接利益；惟調查結果可望有助提升香港廣告的水準。

怎樣保障受訪者的私隱？
由於這調查是以不記名形式收集數據，故不可能辨別個別受訪者的身份。各問卷的資料亦只會綜合起來作分析。填妥的問卷將被緊鎖於研究生位於香港羅便臣道 8 號樂信臺 2 座 2D 之居所內，只有研究生本人可接觸到。問卷所收集的資料，則會被儲存於研究生居所內的一部有密碼保護的私人電腦，與及其導師在澳洲紐卡素大學 Callaghan 分校 SRS125 辦公室之電腦內。只有研究生及導師可透過電腦接觸得到資料。所有問卷及電腦資料，會被儲存五年然後毀滅。

所得資料作何用途？
研究結果會被分析及報告於研究生遞交澳洲紐卡素大學的工商管理博士論文內，並有可能為市場學期刊準備一篇學術性文章；參加者如欲取得此研究結果的摘要，可於 2012 年 8 月 31 日後向研究生以電郵 (kanliu@netvigator.com) 索取。

要怎樣做才可參與此項調查？
在調查開始填寫問卷前，請細讀此有關參加者的資料單張，並確保清楚瞭解其內容。如有任何不明白或有任何疑問，請與研究生聯絡（詳情見下）。

其它資料
如欲索取更多資料，請直接致電 852-90138056 或電郵 kanliu@netvigator.com，與研究生簡迎芝聯絡。謝謝您考慮這邀請。

調查主管
Alison M Dean

有關此项研究的投诉
此项研究計劃已獲大學人類研究道德規範委員會批准，批准號碼為 H-2011-2027。如閣下對參與此项研究的權利有任何顧慮，或對此研究的進行方式有任何投訴，可告知研究生；如屬向獨立人士，則可向大學的人類研究道德規範官員投訴。地址為 Human Research Ethics Officer, Research Office, The Chancellery, The University of Newcastle, University Drive, Callaghan NSW 2308, Australia, 電話 (02) 49216333, 電郵 Human-Ethics@newcastle.edu.au.
Appendix 3.7
Ethics approval notification

HUMAN RESEARCH ETHICS COMMITTEE

Notification of Expedited Approval

To Chief Investigator or Project Supervisor:  Associate Professor Alison Dean
Cc Co-investigators / Research Students:  Ms Ying Che Kan
Re Protocol:  Celebrity Advertising and Source Credibility in Hong Kong
Date:  10-Aug-2011
Reference No:  H-2011-0207
Date of Initial Approval:  09-Aug-2011

Thank you for your Response to Conditional Approval submission to the Human Research Ethics Committee (HREC) seeking approval in relation to the above protocol.

Your submission was considered under Expedited review by the Chair/Deputy Chair.

I am pleased to advise that the decision on your submission is Approved effective 09-Aug-2011.

In approving this protocol, the Human Research Ethics Committee (HREC) is of the opinion that the project complies with the provisions contained in the National Statement on Ethical Conduct in Human Research, 2007, and the requirements within this University relating to human research.

Approval will remain valid subject to the submission, and satisfactory assessment, of annual progress reports. If the approval of an External HREC has been "noted" the approval period is
as determined by that HREC.

The full Committee will be asked to ratify this decision at its next scheduled meeting. A formal Certificate of Approval will be available upon request. Your approval number is H-2011-0207.

If the research requires the use of an Information Statement, ensure this number is inserted at the relevant point in the Complaints paragraph prior to distribution to potential participants. You may then proceed with the research.

Conditions of Approval

This approval has been granted subject to you complying with the requirements for Monitoring of Progress, Reporting of Adverse Events, and Variations to the Approved Protocol as detailed below.

PLEASE NOTE:
In the case where the HREC has "noted" the approval of an External HREC, progress reports and reports of adverse events are to be submitted to the External HREC only. In the case of Variations to the approved protocol, or a Renewal of approval, you will apply to the External HREC for approval in the first instance and then Register that approval with the University's HREC.

- Monitoring of Progress

Other than above, the University is obliged to monitor the progress of research projects involving human participants to ensure that they are conducted according to the protocol as approved by the HREC. A progress report is required on an annual basis. Continuation of your HREC approval for this project is conditional upon receipt, and satisfactory assessment, of annual progress reports. You will be advised when a report is due.

- Reporting of Adverse Events

1. It is the responsibility of the person first named on this Approval Advice to report adverse events.
2. Adverse events, however minor, must be recorded by the investigator as observed by the investigator or as volunteered by a participant in the research. Full details are
to be documented, whether or not the investigator, or his/her deputies, consider the event to be related to the research substance or procedure.

3. **Serious or unforeseen adverse events** that occur during the research or within six (6) months of completion of the research, must be reported by the person first named on the Approval Advice to the (HREC) by way of the Adverse Event Report form within 72 hours of the occurrence of the event or the investigator receiving advice of the event.

4. **Serious adverse events** are defined as:
   - Causing death, life threatening or serious disability.
   - Causing or prolonging hospitalisation.
   - Overdoses, cancers, congenital abnormalities, tissue damage, whether or not they are judged to be caused by the investigational agent or procedure.
   - Causing psycho-social and/or financial harm. This covers everything from perceived invasion of privacy, breach of confidentiality, or the diminution of social reputation, to the creation of psychological fears and trauma.
   - Any other event which might affect the continued ethical acceptability of the project.

5. **Reports of adverse events** must include:
   - Participant's study identification number;
   - date of birth;
   - date of entry into the study;
   - treatment arm (if applicable);
   - date of event;
   - details of event;
   - the investigator's opinion as to whether the event is related to the research procedures; and
   - action taken in response to the event.

6. **Adverse events** which do not fall within the definition of serious or unexpected, including those reported from other sites involved in the research, are to be reported in detail at the time of the annual progress report to the HREC.
• **Variations to approved protocol**

If you wish to change, or deviate from, the approved protocol, you will need to submit an *Application for Variation to Approved Human Research*. Variations may include, but are not limited to, changes or additions to investigators, study design, study population, number of participants, methods of recruitment, or participant information/consent documentation.

**Variations must be approved by the (HREC) before they are implemented** except when Registering an approval of a variation from an external HREC which has been designated the lead HREC, in which case you may proceed as soon as you receive an acknowledgement of your Registration.

### Linkage of ethics approval to a new Grant

HREC approvals cannot be assigned to a new grant or award (ie those that were not identified on the application for ethics approval) without confirmation of the approval from the Human Research Ethics Officer on behalf of the HREC.

Best wishes for a successful project.

Professor Alison Ferguson

**Chair, Human Research Ethics Committee**

*For communications and enquiries:*

**Human Research Ethics Administration**

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